NEW MEDIUM-POWER LOCOMOTIVES READY TO ROLL

August 19, 1968

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RAILWAY AGE

THE TRANSPORTATION WEEKLY

FROM THE COMPUTER:

New help for decision-makers

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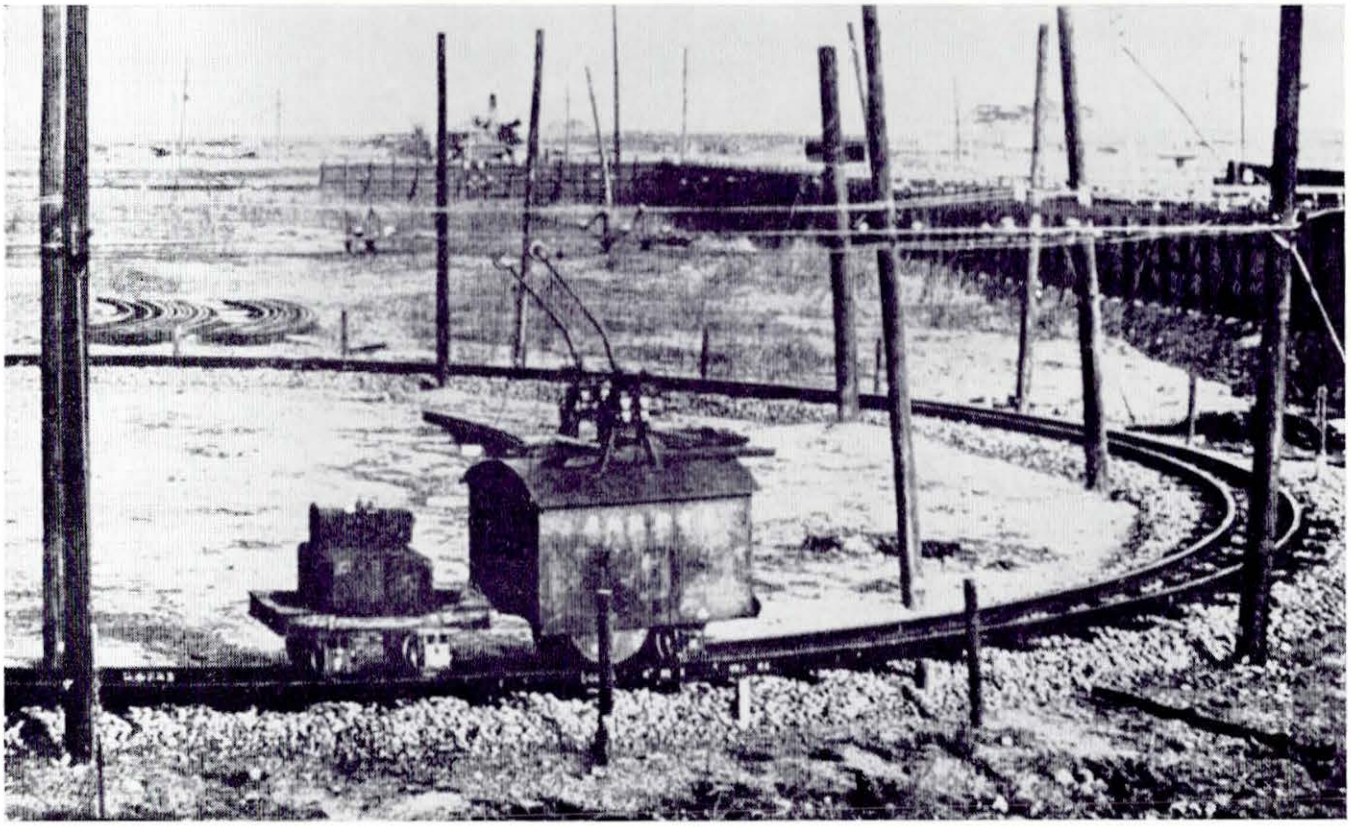
For MoPac, tight control of buying/material management

How Santa Fe streamlines office operations

Sumitomo is the first foreign rolling stock parts maker to get AAR approval.

Is a history of original research the reason?



This photograph is 40 years old.
We took it at our Osaka Works in 1928 during a ten-year study of the abrasion of rails and rolling stock, in collaboration with the Japanese Government Railways. And presented the results of the research at the 2nd International Rail Assembly in Zurich in 1932.
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SUMITOMO METAL INDUSTRIES, LTD. TOKYO, JAPAN

Circle 1 on coupon page 32

Road to

Riches

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In 1890, the D&RGW completed a standard gauge line from Denver to Salt Lake City, and its frontier lines were reduced to mere freight operations. When the ore ran out, so did the railroads. The last to offer passenger service was the D&RGW's Silverton branch, and perhaps because it was the last, it began to come alive. Railroad fans and vacationers came to steam along the cliffs, peer down on the roaring Animas River, snap a sparkling waterfall splashing down between towering evergreens. They came to relive the early days of the silver miners, to visit the ghost towns, or to revel in the unspoiled wilderness. Or they came to see an operating monument to unprecedented railroad engineering, to hear the chug of a 2-8-2 on a long grade and the rattle of wooden coaches.

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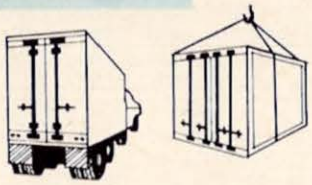

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Circle 4 on coupon page 32

RAILWAY AGE

Aug. 19, 1968 • Vol. 165, No. 7

THIS WEEK

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Decision makers are finding them a big help.

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21 New 2300-hp unit widens EMD line

It fills a gap between 2000-hp and 3000-hp models.

24 Santa Fe puts zip into its letter writing

A remote-control dictating system is a great success.

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. . . AND COMING NEXT WEEK

What are railroads doing to build new business, and how are they doing it? Railway Age of August 26 takes a look at the industry's industrial development efforts, and at the pinpoint efforts of Burlington and Milwaukee. Also, a new approach to an old problem: Right-of-way fire damage didn't really go out when steam locomotives stopped belching smoke and hot cinders. Here's how one road has approached this old and costly problem. Like all Freight Traffic Issues, this one will go to 10,000 shippers in addition to the regular subscription list.

Railway Age, established in 1856, is indexed by the Business Periodicals Index, the Engineering Index Service and the Public Affairs Information Service. Name registered in U.S. Patent Office and Trade Mark Office in Canada.
Published weekly (except for four issues combining two-in-one) by the Simmons-Boardman Publishing Corporation at Third and Hunting Park Ave., Philadelphia, Pa.
Railroad employees' subscription rate, U.S. possessions, Canada and Mexico, $6 one year, $9 two years, all others $15 for one year, payable in advance and postage paid. To railroad employees elsewhere in the western hemisphere, $10 a year. In other countries, $15 a year. Single copies, 60¢ except special issues. Address all subscriptions, changes of address and correspondence concerning them to Subscription Dept., Railway Age, Emmett St., Bristol, Conn. 06010.
Change of address should reach us three weeks in advance of next issue date. Send old address with new, enclosing, if possible, your address label. Post Office will not forward copies unless you provide extra postage.

Circulation Dept.: John Rogers, Director of Circulation, 30 Church St., New York, N.Y. 10007. POSTMASTER—SEND FORM 3579 TO EMMETT ST., BRISTOL, CONN. 06010.
Printed at the Periodical Press, Philadelphia, Pa. Second-class postage paid at Philadelphia, Pa. and at additional mailing offices.

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ADVERTISING COUNCIL

SHORT AND SIGNIFICANT

PC goes after more modern financing tools

Phase I of a three-fold program designed to give the Penn Central more modern methods of financing is now well under way. That phase (recently approved by the ICC) involves the sale of up to $100 million in short-term commercial paper. David C. Bevan, chairman of PC's finance committee, said the paper has been "well received in the financial market." He noted that this form of financing is "virtually new in the railroad industry, but it can provide great flexibility in meeting short term requirements." It will help PC reduce interest costs, he added, since such notes generally sell below the prevailing prime interest rate. Second phase of PC's program will involve establishment of $100 million in revolving bank credit, under a plan to be filed soon with the ICC; this will replace the current bank-loan agreement and short term borrowing which has taken place under it. Phase III involves establishment of a new long-term blanket mortgage which will become the major long term debt vehicle of the Penn Central.

Community asks aid for new transport center

One of the larger communities in Chicago & North Western's suburban-service area is taking C&NW up on its proposal for development of local transportation centers (RA, May 6, p. 26). The Village of Palatine is approaching DOT for federal aid in a two-stage project which would give the town a new railroad station, greatly increased commuter parking and a heliport. First-stage development would include the new station and some additional parking facilities north of C&NW tracks. Later, a four-level parking garage with pedestrian connection to the station would be built south of the tracks. The heliport would be set atop this structure. Over-all planning would also provide for bus and taxi facilities at the station.

SP adding new flexibility to container service

"King-size and accommodating" is the way Southern Pacific describes its new container flat cars, which are designed for use by shippers and consignees who don't have access to cranes or other lift-on/lift-off devices. A prototype car, built by SP's Sacramento shops, has been in service since last September; 10 more cars are on order from ACF for delivery in October. The cars are 110 feet long, and articulated. They accommodate four 20-foot containers, with an 11-foot alley between each pair of containers to permit easy loading/unloading of the boxes while they remain on the car deck. The cars are being acquired principally to handle import/export traffic. And, at about the same time ACF delivers them, SP will also be getting 75 containers, 24-foot units, which will be used in joint SP-Matson moves in the Hawaii trade.

Railroads buy ad spots on NBC news show

The Association of American Railroads has purchased a 13-week sponsorship in the NBC Radio Network's "News on the Hour," NBC announced last week. The radio spots will be the first ads in a new $2.5-million AAR campaign (RA, Aug. 5, p. 8). NBC's 5½-minute newscast is broadcast Monday through Friday from 7 a.m. to 11 p.m. in local time zones.

Ronan warns: Buy now—or pay a high penalty

More than two months ago, New York's Metropolitan Transportation Authority asked for permission to start immediately on a $1.6-billion transit improvement program. But the city's Board of Estimate, which must approve proposed new routes, has been slow to act. Last week, MTA Chairman William J. Ronan appeared before the board to underscore the high cost of delay. Pointing out that $1 billion is available immediately for the program, Ronan warned: "Heavy construction costs are rising at a minimum of 5% a year; we can expect more than $5,700 to evaporate every hour of every day that future funds remain uncommitted." He added: "With the stakes so high, we cannot afford the luxury of interminable debate on countless transportation combinations and permutations. . ."

MONDAY MORNING REPORT

STRONG BACKING FOR LANDBRIDGE

"Landbridge" is an exciting word. As an operating concept, or an economic one, it's easily grasped. Somehow and sometimes, however, there's almost something wistful in private comments about landbridge: It's a great thing—but will labor let it happen? Will containerization really shed its step-child status? Will intermodal coordination really develop as it has to if landbridge is to reach its potential? Doubts do tend to crop up—but not for long, when you listen to declarations like those made recently by the president of American Export Isbrandtsen Lines.

CONTAINERIZATION: THE SINGLE MOST IMPORTANT CHANGE

AEIL is applying for operating-differential subsidy for 45 to 60 sailings a year on so-called Trade Route 29, U.S. Pacific/Far East. AEIL, says President Manuel Diaz, is convinced that "we are at the incipient stage of the most dramatic changes in traffic and trade patterns since the advent of the steamship. . . . These changes will be the result of containerization, which is, without question, the most important and significant technological advance in cargo-handling that has ever taken place in common-carrier steamship operations."

CONTAINERSHIPS AND UNIT TRAINS WILL MAKE IT WORK

Traffic growth on Trade Route 29, Diaz contends, will come from two main sources: (1) Diversion of freight now moving via other sea routes; and (2) the "tremendous movement" of cargo which will come with effective use of the North American continent as a landbridge. These developments, he adds, can come only with (1) the institution of reliable and regular containership services in trans-Atlantic and trans-Pacific service; and (2) the setting up of a "viable transcontinental rail rate structure that will be brought about by unit trains."

THE TRAFFIC POTENTIAL: IT'S WORTH GOING AFTER

How much business is there? As AEIL sees it, at least 75% of the liner cargo movement on Trade Route 12, U.S. Atlantic/Far East, and Trade Route 22, U.S. Gulf/Far East, is subject to containerization, and "all of that containerizable cargo will eventually move via the landbridge on Trade Route 29." The same estimates hold for liner cargo now moving via Trade Route 29: 75% or more could go in containers. Taking all this into consideration, AEIL believes, "landbridge development will change the entire structure of ocean distribution costs. New markets will be created." When will this happen? Perhaps soon. As Diaz sums it up, "the dynamic changes in trading patterns that will result from the container revolution are no longer theoretical."

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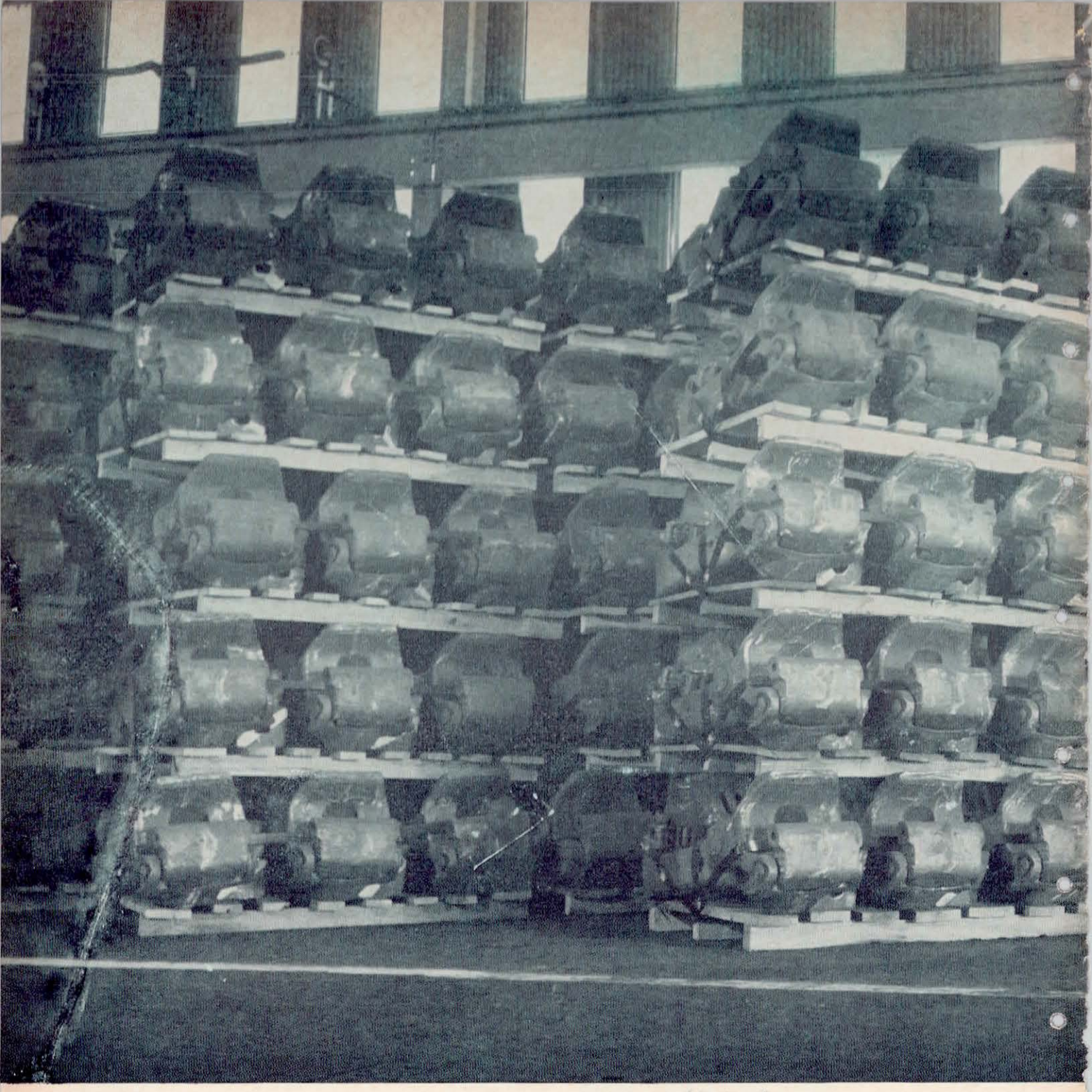

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THE TRANSPORTATION WEEKLY

WEEK AT A GLANCE

Carmen's slowdown hits LIRR riders

For the Long Island Rail Road, it has been a long, hot summer of growing tension in the labor relations arena. In June, a permanent injunction was issued against a threatened strike by the Brotherhood of Locomotive Engineers; subsequently, temporary injunctions forestalled walkouts by the International Brotherhood of Teamsters (which represents track maintenance men) and the Brotherhood of Railway Carmen.

Last week, commuters were feeling the effects of the labor-management friction. What management called a slowdown on the part of Lodge 886 of the Carmen removed nearly 200 electric cars from service—about one-sixth of the LIRR fleet. As many as 50 trains a day had to be cancelled, and Penn Station at rush-hour was a scene of chaos.

Fourteen union leaders, in a recent statement, complained that "layoffs and threats of layoffs in violation of agreements we signed in good faith" have resulted in "deteriorating morale" among employees. The New York Times, not a notoriously pro-management newspaper, put it somewhat differently: "The unions . . . fear an end to some of their costly featherbedding practices."

Meanwhile, commuters on the trouble-plagued New Haven got some disturbing news from a federal court in New Haven. Judge Robert A. Anderson ordered the road's reorganization plan back to the ICC for rehearing, citing the ICC's authorized sale price of $125 million to the Penn Central as too low. He said the Commission should order the New Haven's inclusion in PC by Jan. 1. The alternative: Dismissal of the reorganization proceedings and the end of New Haven service.

PC equipment orders rise to $80 million

One of the biggest locomotive orders of recent years was announced last week by Penn Central. Contracts for 100 high-speed, heavy-duty diesel units were placed with Electro-Motive, which will supply 70, and General Electric, which will supply 30. The order is valued at $24.5 million, bringing to almost $80 million PC's commitments for new freight equipment since the merger of the Pennsylvania and the New York Central became effective last Feb. 1. Earlier, the merged carriers announced orders for 3,715 new freight cars at a total cost of $55 million. Delivery of the new locomotives will begin this month and will be completed by November.

57 exhibitors sign up for container show

57 exhibitors plan to participate in the Second International Container Services and Equipment Exposition, which opens Oct. 28 at Baltimore's Civic Center. Says Kenneth S. Brooks of Mack-Brooks Expositions, Ltd., organizers of the container show: "At this point, the exposition at Baltimore shows every promise of being the largest single assemblage of container services and equipment ever held under one roof." The first exposition was held in London in May of this year. A series of container meetings will be held in conjunction with the exposition. The opening symposium, on Oct. 29, will feature talks by Thomas W. Gleason, president of the International Longshoremen's Association, and Michael McEvey, president of Sea-Land Services, Inc.

A number of railroads will be among the exhibitors.

Pan Am Congress: Equipment exposition

An International Railway Equipment Exposition will be held in Buenos Aires in connection with the XII Pan American Railway Congress, it was learned last week. The Congress itself will be held Nov. 11-23. The equipment show, which opens Nov. 12. will be a 30-day affair. Railway suppliers around the world are being invited to exhibit rolling stock and track maintenance equipment in an outdoor area, and all types of railway equipment in an indoor area. The Congress itself will be divided into five working sections. Section A will be roadway and signals and communications; Section B on rolling stock and traction: Section C on operations and transport coordination; Section D on tariffs and statistics and accounting; Section E on administration, legislation and personnel. Railway Age will conduct a small group of railway men and suppliers to the Congress as part of a general fact-finding tour of South American railways, with stops also planned in Brazil, Peru and Colombia. For further information, write to Robert G. Lewis, publisher, Railway Age, 30 Church St., New York, N.Y. 10007.

GUS WELTY

LINES ON LABOR

Rate-makers off the track?

Railroad rate-making is sometimes referred to as a jungle—and, as Illinois Central President W. B. Johnson sees it, it's time to chop down a few trees and let in some light.

Johnson thinks pricing should do three basic things:

—Maximize return on investment and net income.

—Help railroads determine where to put new investment.

—Promote refinement and redefinition of "ancient public policies so that today's railroads are not hopelessly handicapped in creating new services required by our dynamic economy."

If these objectives become the measure of modern rail rates, he adds, "there is little doubt but what rail profit will catch up with the progress in rail technology. Should this happen in tandem with some new accord between the rail industry and the unions representing railwaymen over the manner in which work is accomplished, the railroads will be an industry with a bright and useful role in the economy."

IC's president takes a hard look at railroad pricing departments—and he finds "no great concern with return on investment . . . Quite obviously, if maintaining return on investment is not a goal of railroad pricing, it is not surprising that pricing has not provided a reasonable return."

The existing rate structure, he declares, "to a great extent has, over the years been designed with an eye upon shippers' market objectives rather than the need to maximize either carriers' net income or return on investment. Much of this stems from an old notion of the long-gone monopoly days that the first objective of a railroad should be to stimulate as much commerce as possible. The corollary of management has been that profit will take care of itself if the volume is there."

What will be needed to set things right? Among other things, "much entrepreneurial ability."

THERE'S A STRONG SUSPICION that the Belt Railway of Chicago strike would never have occurred if the striking members of the Brotherhood of Railroad Trainmen (1) had been aware of the company settlement offer and (2) had been given a chance to vote on it by secret ballot.

THERE ARE INDICATIONS that BRT members were not told that the Belt was offering substantial wage increases to employees working one-and-one crews. There are indications that employees did not have a vote on whether to strike. There are even strong indications that the BRT general chairman and Belt's management had reached a tentative settlement of the dispute as of July 22, a week before the strike began. But on July 26, the Belt says, the general chairman reappeared and "said that while he thought the tentative settlement reasonable, he was compelled by Grand Lodge instructions to reject it and to insist on restoring 73 jobs, which would be filled with new hires."

THERE'S SOMETHING UNHEALTHY about the whole situation. Strikers have been asked why they don't petition their union for a secret ballot vote, and some reply that they don't want to put their names to a petition. Strikers have been asked why they're on the picket line, and some reply that "well, we gotta believe the griever." Strikers, the Belt believes, want the extra money, not the second brakeman. But a vice president of the BRT, Belt says, has declared that "I will never sign for money."

AT LEAST IN THEORY, a union is supposed to be an organization which looks out for the well-being of its members, and which tries to help them improve their lot in life. But the alleged approach of the union in the Belt dispute smacks more of a "father knows best" situation in which the individual has had little say about his well-being, or about the improvement of his lot in life. It seems to be a choice between more money in the pocket, offered by management; and more company on the job, demanded by the union. Under the circumstances, employees might begin to question the union definitions of "well-being" and "improvement."

IT COULD BE that the BRT figured it would bludgeon the Belt into submission as it had several other roads in the past. It could be that the BRT just misjudged the stiffness of the Belt's backbone. And it also could be that the questions raised by the BRT/Belt affair are among the most important yet raised about the whole employee/union relationship in today's world.

FROM THE COMPUTER:

Message switching on the railroads

Second- and third-generation computers are adding a new dimension to paper-flow and its control in the railroad industry.

The key element is the MSC—the message-switching computer. It's an on-line, real-time unit—in effect, it's the telephone exchange of a data-flow network. And its big payoff is in its ability to get current data "distributed" so that decision-makers can make their decisions more intelligently, on the basis of now, not then.

This new dimension in computer usage is, of course, an outgrowth of earlier computer applications: It was, really, quite a logical step to go from purely accounting functions to message switching. However, advancements in technology were necessary, to provide computers with large memories, fast operations and simultaneous processing capability.

Basically, message-switching computers receive written messages—train consists and the like—in teletypewriter format (100 words per minute for example), plus data transmitted directly from punched cards or from paper or magnetic tape. The MSC writes the message onto a magnetic core or drum or disc file. Because all messages have an address, the computer reads

Message-switching computers:

Railroad	Location/Date in service	Manufacturer Model	Hardware maintenance	Messages in and out, daily	Characters in and out, daily (millions)	Types of messages	Number of lines	Number of outstations
Burlington	Chicago, January 1968	IBM 360/40	IBM	2,000	10	Inquiry, retrieval	44	36
Canadian National	Toronto, December 1964	Collins C8401 (two), C8560	CNT	309,500	90	Airline, rail reservations, administrative, operating	311	900
CP Rail	Montreal, March 1967	IBM 360/40	IBM	8,000	8	Consists, inquiries, administrative	61	200
C&O/B&O	Huntington, W.Va., December 1966; Baltimore, June 1967	RCA	RCA	11,500, Huntington; 31,700, Baltimore	10, Huntington; 66.6, Baltimore	Car tracing Telscar reports, administrative	31, Huntington; 66, Baltimore	240, Huntington; 498, Baltimore
Chicago & North Western	Chicago, May 1968	RCA	RCA	135,000	10.8	Train consists	25	83
Duluth, Missabe & Iron Range	Joliet, Ill., September 1968	IBM	IBM	—	—	—	2	8
Frisco	Springfield, Mo., January 1968	IBM	IBM	7,300	5.5	Operating data, administrative	27	165
Great Northern	St. Paul, June 1968	Univac	Univac	3,200	14.4	Car movements, administrative, input and output on terminal status	64	89
Illinois Central	Chicago, November 1967	IBM	IBM	29,000	21	Administrative, data inquiry	98	174
Louisville & Nashville	Louisville, May 1967	IBM 360/40	IBM	11,100	13	Consists, administrative, car orders, accounting	62	126

the address and selects an outgoing communications circuit over which the message is sent to destination. All this takes less time to do than to describe. Although it may take several minutes for total transmission time (on a train consist, for instance), the switching is accomplished within a fraction of a second.

• **MSC on 20 roads.** Twenty railroads have MSCs in service or about to go into service. These devices operate 24 hours daily, the year around.

While most roads use message-switching computers for handling administrative messages, train consists and similar data, Canadian National has also put its three computers to work handling airline and railway reservations. Although most U.S. railroads do not particularly need this type of computer service, some experts are predicting that such computer handling techniques might well be applied to empty-freight-car distribution. As empty cars became available, car initial and number along with an appropriate type symbol would be fed to the computer. Any local agent or freight sales office could inquire as to availability of empty cars. A computer printout, either on paper or as a video display, would list cars available by type and location.

• **Two, maybe three, computers.** All but two railroads report that their message-switching computers are in duplicate, though in some cases, the duplicate computer is not identical to the on-line unit. Most roads use the standby unit for batch processing, but it can be interrupted to handle message switching. Some roads, such as CN and the NYC district of Penn Central, have full duplicate units. Both computers are used for message switching.

From the table, it is apparent that millions of characters are handled daily by these switchers—hence the requirement of large, extremely fast processors. Because of their multi-processing ability—they can handle several processing functions simultaneously—railroads often have these computers handling several chores at the same time. Several railroads report plans to install second and even third MSCs to

Where they are, what they do

Railroad	Location/Date in service	Manufacturer Model	Hardware maintenance	Messages in and out, daily	Characters in and out, daily (millions)	Types of messages	Number of lines	Number of outstations
Missouri Pacific	St. Louis, August 1968	IBM 360/50	IBM/MP	—	—	Consists, car data	16	47
Penn Central	New York, October 1963; Philadelphia, January 1966	Collins, NY; IBM 7740, Philadelphia	PC, NY; IBM Philadelphia	19,800, NY; 27,700, Philadelphia	67, NY; 30, Philadelphia	Car movements, administrative, ACI inquiry and service	191, NY; 84, Philadelphia	491, NY; 809, Philadelphia
Reading	Philadelphia, January 1966	IBM 1440 (two)	IBM	1,800	2.8	Administrative, car movements	14	43
Rio Grande	Denver, February 1967	GE	GE	—	5	Administrative, transportation	30	60
Santa Fe	Topeka, Kan., 1969	IBM 360/65	IBM	120,000	35	Administrative, data	225	415
Seaboard Coast Line	Jacksonville, February 1965	IBM	IBM	2,300	9.2	Consists, interchange, inquiry	30	67
Soo Line	Minneapolis, September 1968	IBM 360/40	IBM	—	3	Consists, interchange, administrative	12	30
Southern	Atlanta, September 1964	IBM 7740 (two)	IBM	150,000-180,000	4.7	Waybill information, car movements, edit-detected input errors, location	84	30, in-house; several hundred, customer Teletype
Union Pacific	Omaha, April 1968	IBM	IBM	6,326	24.7	Consists, administrative	94	112
Western Pacific	San Francisco, September 1967	GE DN30	GE	1,750	3.5	Consists, administrative	28	56

LUTHER MILLER

AS THE EDITOR SEES IT

THE PUBLIC VS THE TRUCKERS —Whenever railroad men raise their voice in protest against a piece of legislation that favors truckers, they are accused of pleading a narrow self-interest. Truckers, on the other hand, have an almost uncanny knack (as discussed on page 40 of this issue) of being able to persuade Congress that anything in their interest is also in the public interest. It is all the more significant, therefore, that the great groundswell of opposition that has now stalled the "big truck" bill in Congress has been generated not by the trucking industry's arch competitors, but by that very public whose interests the truckers so piously pretend to serve.

RUBBER-TIRED FREIGHTS? NO, THANKS —How the motoring public feels about S. 2568—the Senate-approved bill, now awaiting House action, that would permit multiple-trailer rigs to rumble at will over the Interstate Highway System—is succinctly summed up in the August issue of "The New York Motorist," official publication of the Automobile Club of New York. NYM asks: "Will you soon be sharing the highways with rubber-tired freight trains?" That summarizes pretty well the attitude of the AAA as a whole to the double-bottom (or triple-bottom or quadruple-bottom—who knows where it will end?) bill.

"PRIVILEGE LEGISLATION" —George Kachlein, Jr., executive vice president of the AAA, describes the bill as "privilege legislation of the worst sort" which would affect fewer than one million trucks "at the expense of the comfort, convenience and, above all, the safety of the drivers of our nation's 81 million passenger vehicles." Kachlein warns: "If the proposal becomes law, the trucking lobby will have run over the American motorist." What will it cost to upgrade highways to accommodate heavier rigs? DOT says the price tag will be around $2.8 billion.

WHAT RAILROADERS CAN DO —Certain Congressmen have been sufficiently impressed by arguments like these that they have refused to be stampeded, and the bill now seems to be in some jeopardy in the House. But anyone who knows the power and persistence of the concrete and rubber lobby also knows that the fight is far from over; and now might be the time for railroaders to have their say. Our argument is a sound one—that railroads stand ready, willing and able to haul the freight in steel-wheeled trains over privately-financed roadways. The voice of half a million railroaders can be loud and persuasive—especially when added to that of 81 million motorists.

handle the myriad of tasks additional to pure message switching.

Also in the works for several railroads are additions of TWX and Telex circuits to these message switchers to handle inquiries from customers regarding car-location information. And the two roads not now having standby computers for message switching will have such capability next year when new computers are placed in service.

● **Low- and high-speed links.** Sixty- or 100-word-per-minute teleprinter circuits are used by most roads for input to and output from these MSCs. In all or most instances, the computers poll the various outstations. When polled, a station replies that it has a message for the computer, or that it is in the receiving mode, and the computer can send a message to it.

However, where customer inquiry is available or will be added, the customer's outstations will initiate the call to the computer.

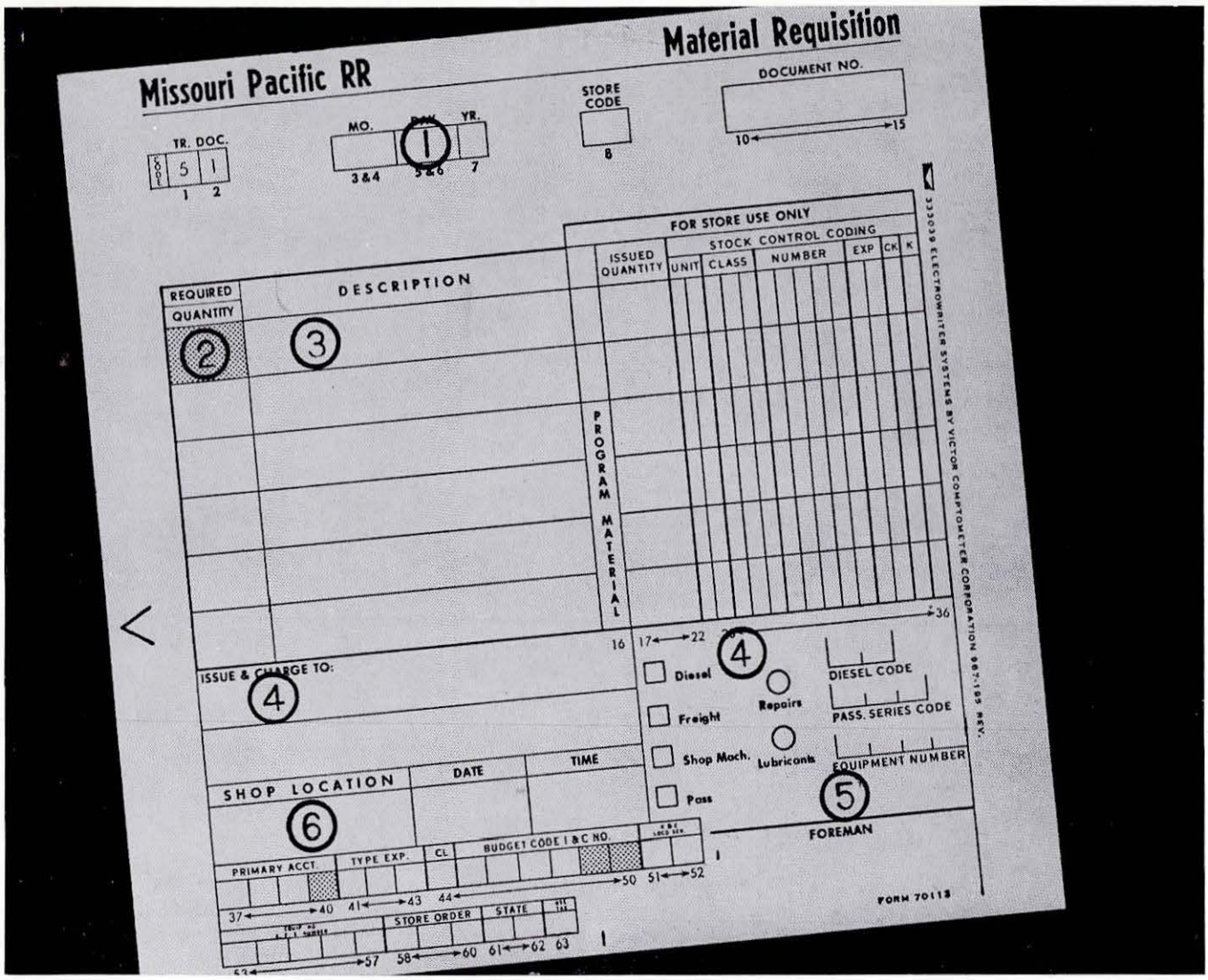
Computer-to-computer high-speed data links are used by some roads for handling data messages between them. Most of these high-speed lines are operating, or will operate, at 1,200 or 2,400 bits per second. Some use magnetic tape or disc files for the storage medium at either end of the circuit.

For the future, there is thinking in some areas, particularly among the communications engineers, that if computers can switch messages, why not have them switch telephone calls? It takes but little imagination to visualize a freight sales office, for example, with such teleprocessing capability. Equipment in such an office could provide readout in the form of video displays (cathode ray tubes), paper tape, multi-copy paper forms, facsimile, voice recording or the actual voice, or electronic pens capable of making drawings.

For output, the office could use an electric typewriter, conventional dial telephone, electronic pen for making drawings or sketches, facsimile or intercom units so the user can talk while moving about his office.

With the high-speed message switchers or teleprocessing units available or under development, the various types of communications inputs can be switched among two or more stations. Even voice-actuated typewriters have been developed in laboratories.

So, tomorrow's railroad officer may be able to make a telephone call to a customer, and leave a written record at the customer's office, should the customer be away. For the local freight sales agent, a reverse flow would be of tremendous help, and a timesaver. He could dictate waybill information over the telephone, and the computer would prepare the waybill. ■



THIS MATERIAL REQUISITION, for shop use at warehouse locations equipped with Electrowriter equipment, provides a uniform procedure for mechanical-department personnel to draw needed items from stock: (1) Date should be date of preparation and date of submission to the Materials Department; (2) quantity should indicate a total, with size of package or container indicated under item description; (3) description should be "the best available to you," including builder's part number when available; (4) right side of form should be marked to indicate proper issuance and charge, left side to indicate applicable budget code; (5) approval of department foreman; (6) shop location to speed delivery.

MoPac buys by the book

Its purchasing manual lists policy—including the care and information-feeding of salesmen.

Missouri Pacific is leaving nothing to chance, in aiming for top efficiency in the complicated business of buying and managing company material and supplies.

The emphasis is not surprising. MoPac's so-called "ordinary purchases" last year totaled $74.4 million, and the dollar outgo isn't expected to drop. In addition, the system is expanding, and now embraces MP itself, Texas & Pacific, Missouri-Illinois, Chicago & Eastern Illinois, and Kansas, Oklahoma & Gulf, and affiliated companies.

Key to MoPac material management is the book—the Purchases and Materials Procedures Manual. The instructions it contains are not likely to be overlooked: It would be hard to "lose" the bright orange binder—and equally hard to forget the no-nonsense approach MP takes. Over the signature of Executive Vice President John H. Lloyd is the reminder that the rules and instructions govern purchase, sale, storage and distribution of materials, supplies and certain services "and must be complied with by all employees whose duties are in any way affected thereby."

• **Acquaintance, assistance.** Harold M. Hoffmeister, vice president-purchases and materials, points out that the manual "has been prepared to acquaint all employees with basic company policies related to purchases and materials management, and to assist using departments in becoming better acquainted with the P&M organization, its strategic role within the company and its necessary operating procedures."

MoPac begins with the premise that "the purchase of all equipment, materials and supplies is the prerogative of the vice president-purchases and mate-

GM

MARK OF EXCELLENCE

THE WABASH CANNON BALL

**"The Wabash Cannonball"—
another name for the Ireland, Jerusalem,
Australian, and Southern Michigan Line—
tells of a mythical train built by the
Bunyan Boys of Paul Bunyan fame.
It had 700 cars, and traveled
so fast that when it stopped it was still
going 65 miles an hour! One day it
reached such terrific speed that it
took off like an airplane, and
was never seen again.**

**From the great Atlantic ocean
To the wide Pacific shore
She climbs the flowery mountains
O'er the hills and by the shore
She's mighty tall and handsome
She's known quite well by all
She's a regular combination
On the Wabash Cannonball**

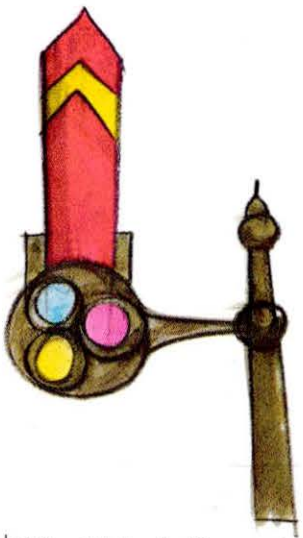
**Listen to the jingle
The rumble and the roar
As she glides along the woodland
O'er the hills and by the shore
Hear the mighty rush of the engine
Hear those lonesome hoboes call
Travelin' through the jungle
On the Wabash Cannonball**

**Well she came down from Birmingham
One cold December day
As she pulled into the station
You could hear all the people say
She's from Tennessee
She's long and she's tall
She came down from Birmingham
On the Wabash Cannonball**

**Listen to the jingle
The rumble and the roar
As she glides along the woodland
O'er the hills and by the shore
Hear the mighty rush of the engine
Hear those lonesome hoboes call
Travelin' through the jungle
On the Wabash Cannonball**

**Here's to Daddy Claxton
His name forever stands
And always be remembered
In the courts throughout the land
His earthly race is over
And the curtains 'round him fall
They'll carry him home to Dixie
On the Wabash Cannonball**

**Listen to the jingle
The rumble and the roar
As she glides along the woodland
O'er the hills and by the shore
Hear the mighty rush of the engine
Hear those lonesome hoboes call
Travelin' through the jungle
On the Wabash Cannonball**



"The Wabash Cannonball," like many another great old railroad song, keeps alive the colorful huffing and puffing days that every trainman loves to remember. Nostalgia for the past and dedication to progress—these are the two inseparable phases of our railroad history. We at NDH are as proud of both sides of the coin as you are. That's the reason we're running this reminiscent series of ads. It's also why we keep right on making better NDH Taper Freight Bearings. At the rate we're both going, one day soon downtime should take the "Wabash Cannonball" route into memory and myth! If you'd like us to send you a full-color reprint of this advertisement (without commercial), just ask. It's part of a continuing series which we think will make a handsome group for you to frame for your office.

NEW DEPARTURE-HYATT BEARINGS

Division of General Motors Corporation, Sandusky, Ohio 44870

© New Departure-Hyatt Bearings Division, General Motors Corporation 1968.
Wabash Cannonball—Copyright, 1933-1939, Peer International Corp.

PRINCIPAL SUPPLIERS HAVE ACCESS TO THE BUYING MANUAL

rials. He will either arrange for purchase or delegate this authority. The responsibility for conducting and concluding negotiations affecting purchases, prices, deliveries, terms and adjustments rests with the Purchasing Department. In discharging this responsibility, it is necessary to cooperate closely with other departments. Salesmen representing suppliers who wish to discuss any problems with members of other departments should make their original contact through Purchasing. Purchasing will keep the using departments fully informed on the availability of materials, possible price changes and new product developments."

In specific problem areas, the manual makes it clear that control shall be with the Purchasing Department. Where prices must be secured for estimating purposes, for example, or in cases where deliveries must be expedited or purchase orders changed or cancelled, using departments are instructed to handle through Purchasing, not direct with vendors.

• **Laying it on the line.** There are equally specific procedures to be followed on other key points. There is a prohibition on giving vendor salesmen or other representatives "information that requisitions specifying their equipment, materials or supplies have been or will be submitted." There is also a definite policy to be followed on material testing: MoPac is "interested in new material or equipment which results in savings for the company and we actively solicit information along these lines. We are willing to test new products if they offer definite promise of saving. However, since tests are expensive, we cannot be a general proving ground for all products. We restrict our tests to those products which appear most promising. . . . The results of any test or conclusion reached regarding the use of any equipment, materials or supplies will not be given to manufacturers or their agents except by authorized railroad officers."

Point-by-point instructions are detailed—with 18 topics covered under ordering, six under warehousing and shipping and two under material disposition. All instructions except those on assignment of requisition numbers have been revised as of July 1.

Certain concepts are basic to the instructions. For one thing, MP likes competition: "We attempt to develop maximum competition among our vendors. We believe it is good purchasing policy to have several active suppliers for each commodity. This gives us better assurance of supply at fair prices and builds good will in a wider circle of industrial contacts."

• **The management concept.** Hoffmeister's department also likes buying at local use points, for the reduction in lead-time and transportation costs which it permits. And finally, P&M people work on a definite material-management concept:

"Our policy on inventory is to carry minimum quantities of material necessary to protect the continuity of our own operations. Consistent with good buying practice, we do not purchase speculatively. We may buy ahead against known market or price changes, but only after thorough consideration. We attempt to standardize across using locations items puchased, stocked and used for a given purpose. We encourage the use of a given item for as many applications as possible. At times, it is more advantageous to purchase and use a more costly item in two or more applications than to stock a different item for each application."

Local warehouses

MoPac now has 10 material warehouse points, including two on T&P and one on C&EI. Each warehouse "protects the requirements of its local mechanical-department operation and, to a limited extent, other using departments. In addition to the local operation, the material distribution center at North Little Rock protects the material requirements of all on-line locations on a scheduled basis. Material control supervisors, responsible to the manager of materials, travel over the entire system to assist using-department personnel with their problems related to materials and at the same time to act to insure that all unapplied materials are properly handled and cared for."

• **A word for the vendors.** While MoPac's P&M bible is mainly intended for on-line guidance of P&M and using department people, it's also being made available to principal suppliers—as a means of making known basic MP policies and as a "continuing reminder of the duties and responsibilities involved in procurement."

In talking to the vendors, railroad P&M officers lay out the basics in similar fashion—and they also go into such areas as price quotation and general relations with suppliers.

In getting competitive costs for materials and services, MP points out, "we believe in securing written quotations where the dollar value is sufficient to warrant the expense of handling. We recognize that submitting quotations often requires considerable time and expense on the part of the supplier. No one is asked to quote unless we are reasonably certain that the concern is able to furnish the material or perform the service required. All quotations received by this department will be confidential and are not divulged to competitors under any condition. We expect all bidders to stand or fall on the basis of their first quotation unless there is obvious evidence of an error. If there is any change made in the specifications or other conditions after the submission of bids, all suppliers will be given the opportunity to submit revised quotations.

"We encourage the submission of alternate bids, where improved methods or substitute materials will be better adapted to our needs. Your selection as a prospective supplier is indicative of our confidence in you. We reserve the right to exercise our best judgment in determining the proper number of bids, the frequency of price redetermination on repetitive items, the suitability of a supplier or the most advantageous combination of quality, delivery, service, dependability and price."

• **Good will: Not "packaged."** MoPac knows, Hoffmeister tells suppliers, "that vendor good will does not come packaged with his product, nor is it purchased by payment of his invoice. It must be cultivated by courtesy, honesty and fairness on our part. When a salesman calls at our office, we see him promptly. He will have a fair hearing of his sales presentation. If his company does not merit our business, we inform him of the reason—such as, price quoted too high, delivery quoted too late, performance or delivery or quality not satisfactory in the past, insufficient reason for us to change from a proven satisfactory source, too much expense involved in verifying the supplier's claim in view of potential benefits, technical assistance received from competitors is deemed of greater value, supplier's policy on rejected material adjustments not satisfactory."

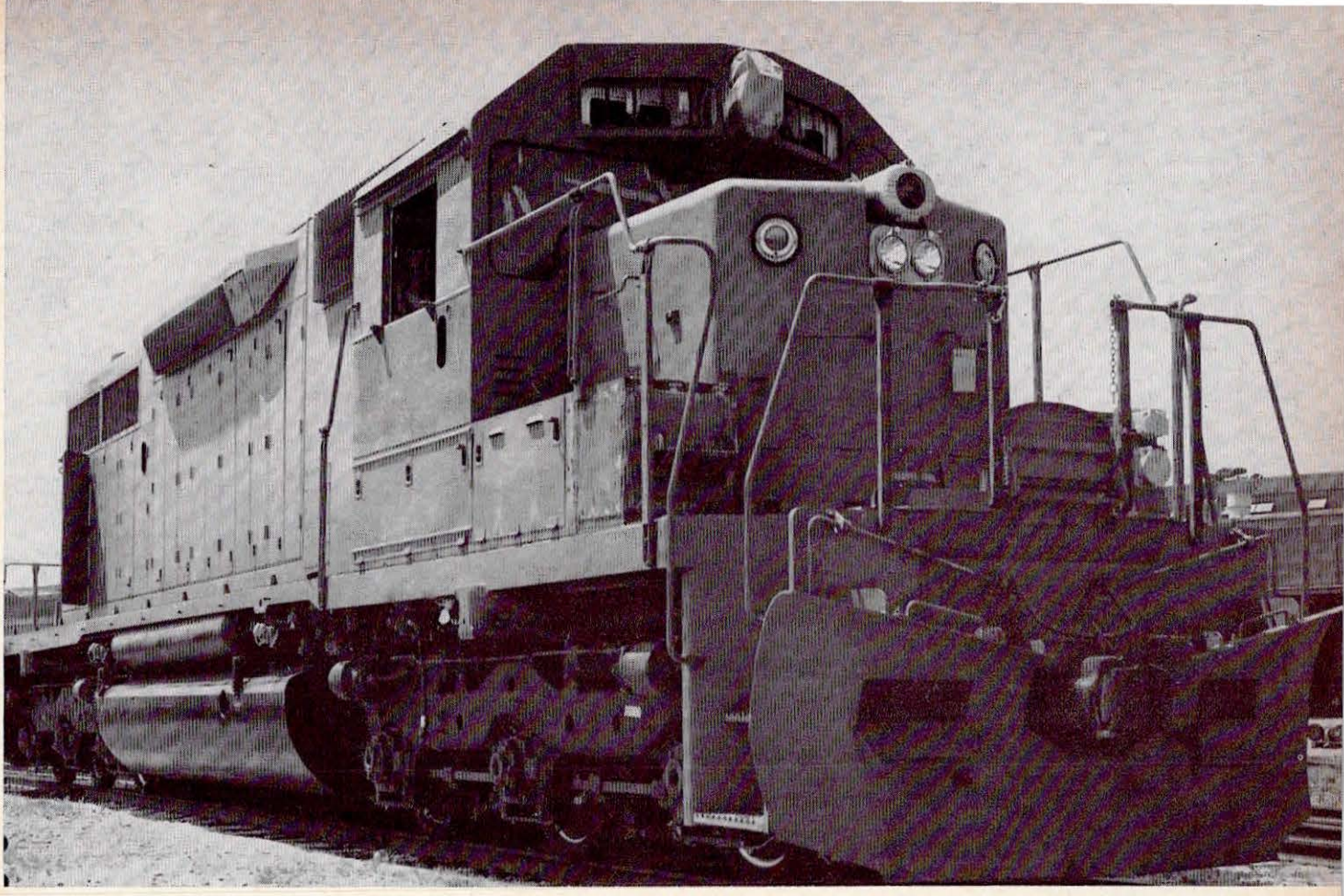
Over-all, in-house or externally, the P & M manual is aimed at attaining the four-part objective of

— Making available the materials, equipment, services and supplies required at the lowest cost, not price, at the proper time.

— Maintaining the inventory investment as low as possible consistent with market conditions and the economics involved.

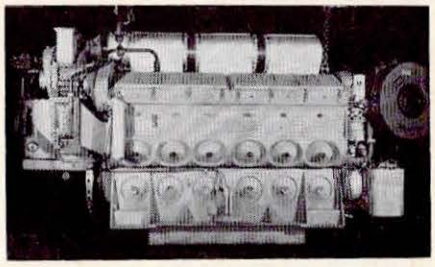
— Controlling effectively and economically all unapplied materials on the property.

— Disposing of equipment and materials no longer required, to the best advantage of the company. ■



FRESH OFF LINE and as yet unpainted is first SD-39; six-motor models are going to SP and MN&S.

New 2300-hp unit widens EMD line



TWELVE CYLINDER turbocharged diesel tops output of unsupercharged 16-cylinder type in 2000-hp model.

With its new 12-cylinder turbocharged engine, builder fills a gap which did exist between its 2000-hp and 3000-hp models.

A gap in the broad range of motive power it offers the railroad industry will be plugged this month when Electro-Motive Division of General Motors delivers the first of a group of new 2,300-hp "39" series locomotives. Wedged in between the builder's 2,000-hp "38" series and the 3,000-hp "40" series units, this most recent addition to the EMD family of diesel-electric locomotives features a new 12-cylinder, turbocharged version of the 645E engine.

One of the new units—an SD-39—will be included in a special track exhibit at EMD's manufacturing facilities at LaGrange, a Chicago suburb, during this year's Coordinated Associations meetings Sept. 29-30 and Oct. 1-2. EMD expects to have bus service between the downtown Chicago meeting headquarters at the Sherman House and the plant on Oct. 1. In addition to the SD-39, EMD is also planning to display six others of its ten domestic locomotive models. At LaGrange will be an SW-1001 (low cab), SW-1500, GP-40, GP-40P, SD-40 and an SD-45.

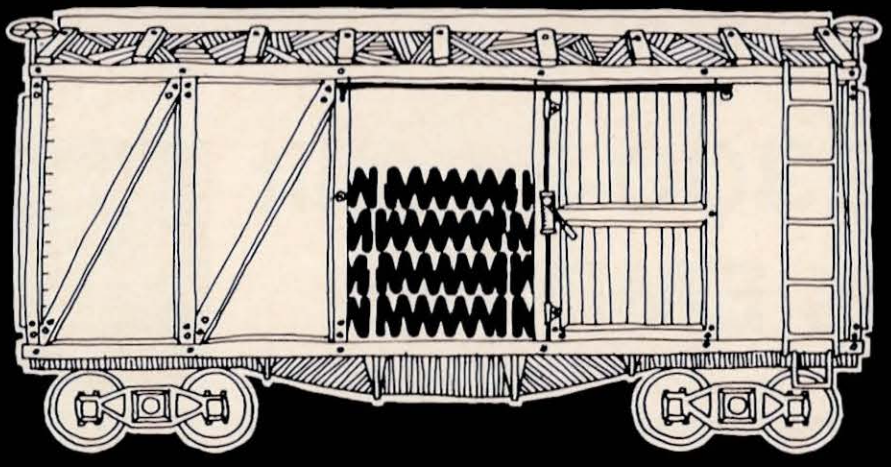
• **GP and SD types.** Like the 38s and 40s, the new 39 series units are available in both GP and SD types. The GP, with four axles and four traction motors, is 59 feet 2 inches long and weighs 250,000 pounds. The new six-axle SD-39, equipped with six motors, is approximately 6½ feet longer and weighs in at 356,000 pounds.

Although the new series' engine has four fewer cylinders than there are in the unsupercharged diesel powering the 2,000-hp 38 series, it does generate 300 more horsepower and gives better full-load specific fuel consumption. EMD officials expect better performance from the new units because each will be fitted with the IDAC wheel-slip control system. IDAC (Instantaneous Detection and Correction), developed by EMD engineers, is now standard equipment in all the builder's new units.

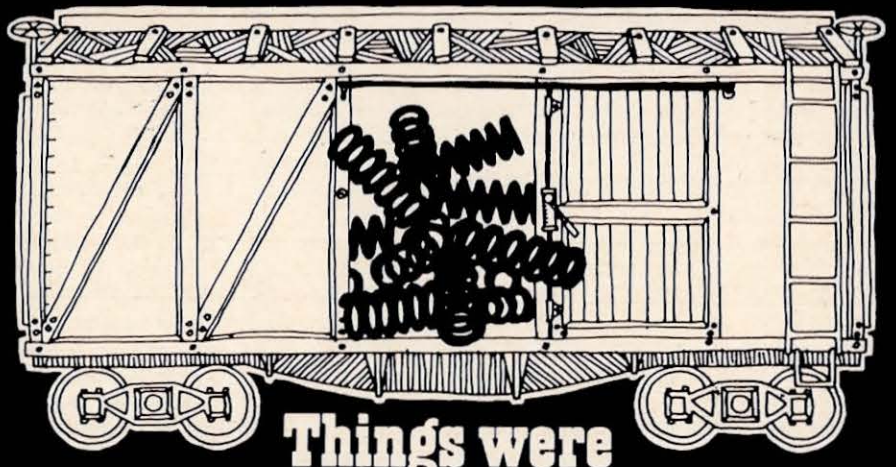
• **For SP and MN&S.** The first of the new 39 series units to come off the EMD assembly line are scheduled for delivery to Southern Pacific and Minneapolis, Northfield & Southern. Where high speed is not a factor and severe grades exist, the new series will find good application, explains an EMD engineer. MN&S, which describes itself as virtually a belt-line serving the Twin

Remember The Good Ol' Days?

When AAR coil springs were shipped like this...



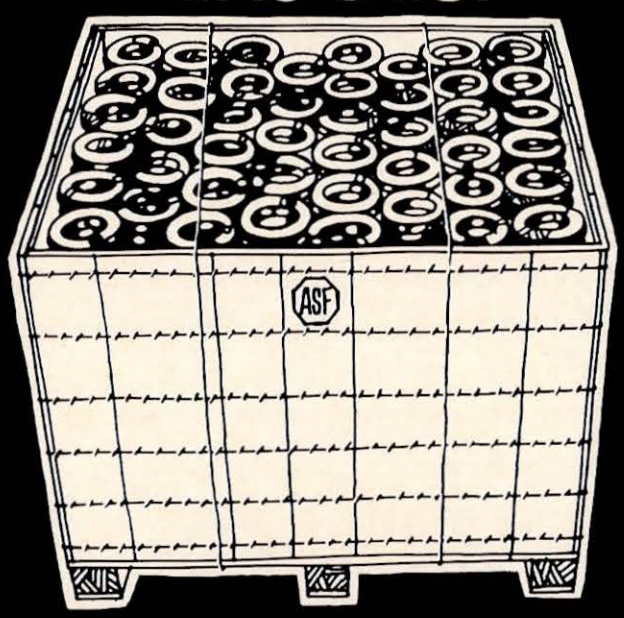
and arrived like this?



Things were in pretty much of a tangled mess.

Then... Along Came The Thinking Men From ASF

with Palletized Shipments like this!



It made all of the storekeepers happy. And encouraged other spring makers to do the same. That's progress—That's ASF.

ASF American Steel Foundries

ONE OF THE Amsted INDUSTRIES

Cities area, will use its pair of SD-39s in road-freight service between Minneapolis and Northfield, Minn., a run of approximately 45 miles.

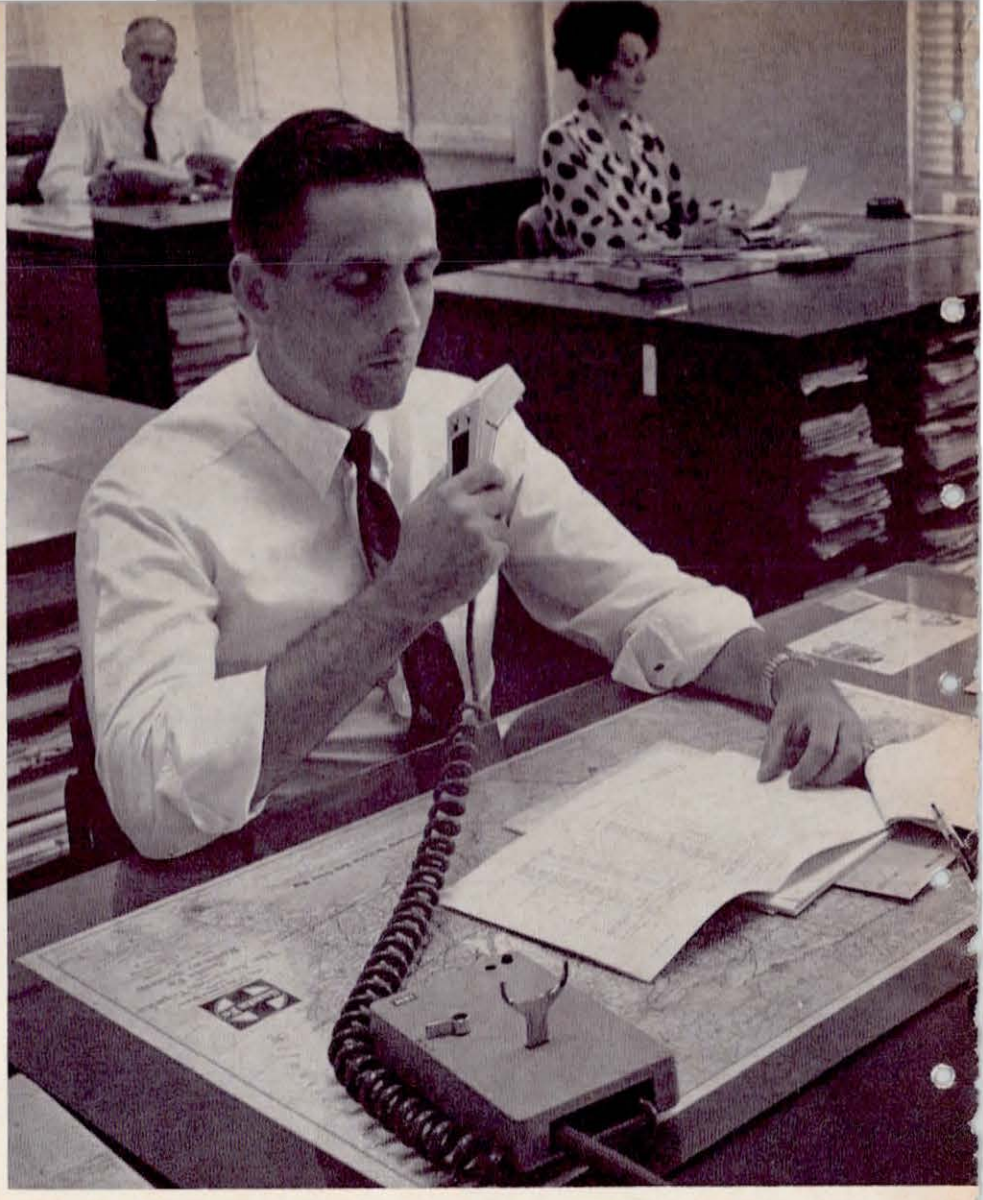
The two new units, with a 1,500-hp switcher sandwiched between them, will replace four 1,200-hp switchers now used on the 45-mile run. "We have 2% ruling grades in both directions on our line," observes V. L. McMahon, MN&S superintendent of motive power. "The new SD-39 units will fit our motive power needs very well."

Although the new 39 series units represent the first railroad application of the 12-cylinder turbocharged 645E engine, the new power plant is not untested. Prior to its acceptance for use in production locomotives, it was subjected to intensive field testing by EMD engineers. The engine, which is GM's two-cycle Vee type, bears the same standard configuration of the other 645E diesels. It has a 9-1/16-inch bore, 10-inch stroke, and has a full-load speed of 900 rpm.

• **D-C transmission.** Like their predecessors in EMD's 38, 40 and 45 series locomotives, the new 39 series units are equipped with D-77 traction motors. But while the 40 and 45 series have the AR-10 traction alternator and a-c/d-c transmission, the new GP-39 and SD-39, like the 38 series units, have a d-c transmission with the D-32 main generator.

Fuel tank capacity of the new units, which have the road-switcher carbody configuration, can be varied. For instance, the SD-39 has a standard 3,200-gallon fuel tank which can be modified upwards to 4,000 gallons. Gear ratios available for both types of units are 62:15, 60:17 and 58:19 which allow top speeds of 71, 83 and 95 mph, respectively. These ratios and speeds are identical with the 38, 40 and 45 series units.

Just as the 3,600-hp SD-45 and FP-45 locomotives introduced by EMD in recent years are helping fill railroad needs for a high-powered units to pull high-speed trains, the new 39 series units are also designed to fill specific train operating requirements. While the new units may not be forerunners of the much-talked-about third generation of diesel motive power, nor in the estimation of EMD officials do they indicate a possible downturn in the size of units selected by railroads, they do have a definite place in the overall motive power picture. EMD officials feel that the new GP-39 and SD-39 will help broaden the range of motive power from which railroads can choose the right locomotive to do a specific job more effectively. ■



DICTATION BY REMOTE CONTROL is provided by portable microphones that can be

Santa Fe puts zip

A new and efficient operation in the accounting department gives letter writers electronic access to the typing pool.

Start with 400 people who, at one time or another, must dictate correspondence.

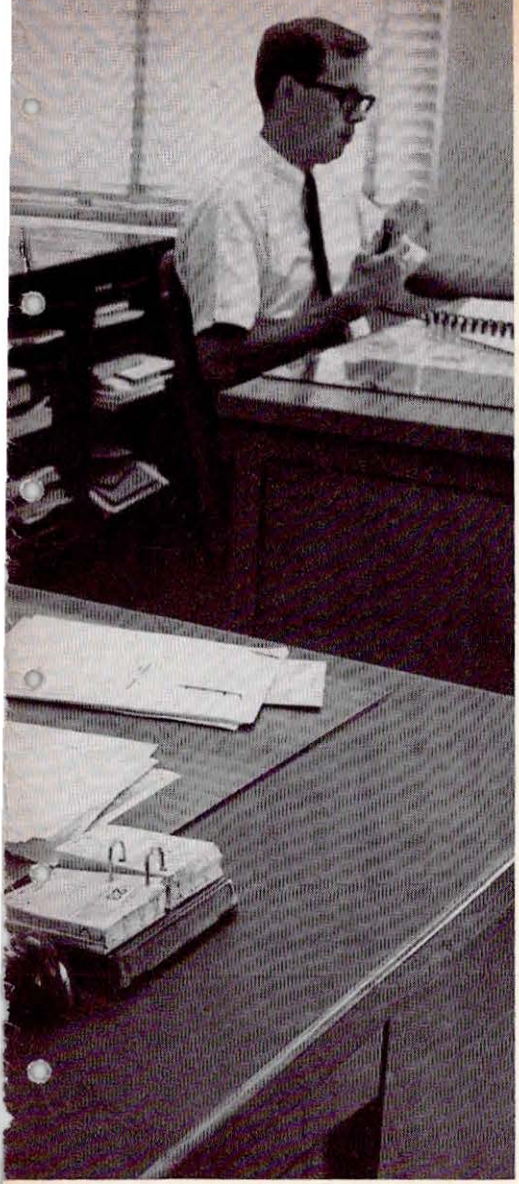
Add about 4,000 letters a month, most with several carbon copies.

Throw in 150 complicated statements, financial and other reports, some more than 20 pages long.

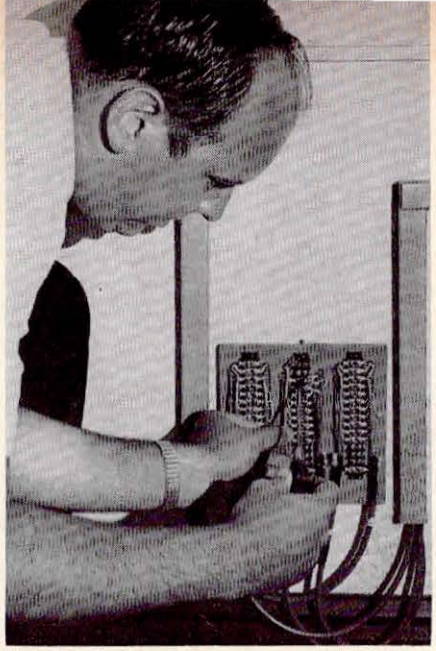
Spread all these ingredients through an accounting department on four different floors, then funnel them to a typing pool of 20 people.

• **Disaster—or a dream?** It sounds like a recipe for disaster. But W. E. Willingham, general auditor for Santa Fe, will be quick to point out that if the system is all tied together with the proper equipment, it can work like a dream. As a matter of fact, IBM, which provided equipment for the installation in Santa Fe's accounting department at Topeka, Kan., labels it one of the largest, most efficient dictation systems of its kind.

System improvement all started in late 1966, when Santa Fe's accounting department officers became dissatisfied with the existing arrangement. Dictation equipment then in use was becoming outmoded, while the growth of paper work, reports and correspondence was booming. So Santa Fe's officers sat down with IBM representatives to seek a solution.

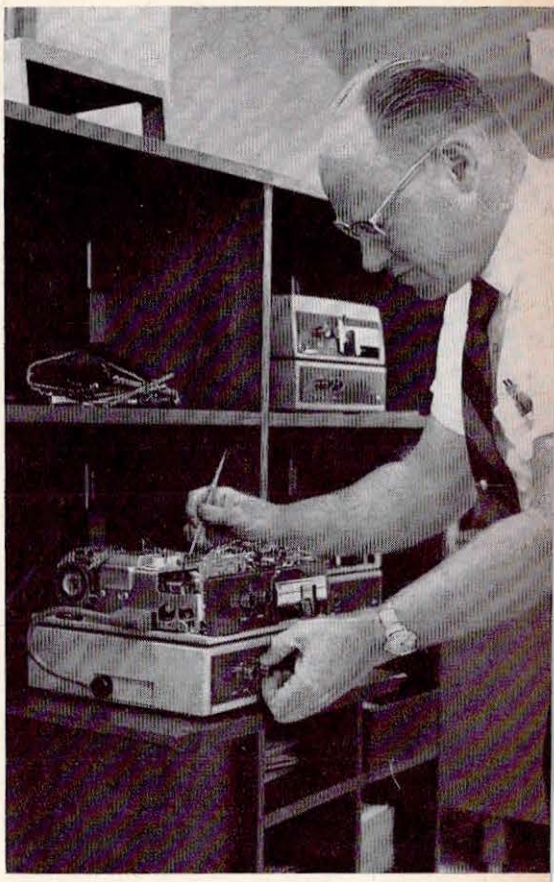


plugged into 83 stations by 400 users.



QUICK-CHANGE STATIONS

In wiring the Selective Recorder Network, Santa Fe electricians used solderless terminals to provide for quick change of stations from one location to another.



EASY TO SERVICE

Six recorders in Santa Fe's typing bureau are mounted on sliding shelves so tapes can be easily loaded and the equipment efficiently serviced.

into its letter writing system

For 30 days a detailed record was kept of all transcription material, including an extra carbon copy of everything typed or started. The material was analyzed as to time consumed in replying to correspondence, point of origin, clarity of dictation, frequency of "restarts," and general productivity within the typing bureau.

A change was clearly in order, and the decision was made to install the IBM Selective Recorder Network (SRN).

● **Where the action is.** Studies had pointed to 83 high-volume correspondence desks throughout the four floors on which dictators were located. Microphone plugs were installed on these 83 desks, and 45 remote, portable microphones were supplied. In the typing bureau, five SNR recorders were installed, connected directly to the 83 dictating stations. All typists were equipped with IBM electric typewriters.

The 83 plugs are accessible to all the 400 people who might want to dictate —if a microphone is not in use at one desk, it can be unplugged and moved to another location.

To operate the microphone, the dictator simply lifts it and waits for a light indicating a free recorder. If he gets a "busy" signal, he moves a switch and automatically is connected to another recorder. When dictating, the individual first identifies himself by name, department and telephone extension—in the event of a question by the typist—then continues with the letter. If there are special instructions for the typist, the dictator pushes a button which gives an indication at the receiving end, then gives those instructions. Noting this indication, the typist will check the special instructions before beginning, thus avoiding costly restarts. Frequent messenger service between the typing bureau and the various offices returns finished correspondence to point of origin.

● **Sight unseen . . .** Unlike the practice in usual desk-top dictation systems, the dictator never physically handles the dictation belt—or even sees it, for that matter. Correspondence is normally returned to the dictator for signature the same day, depending upon the time of day dictated and the volume of work. Service is at least twice as fast as that given by the old system, which necessitated physical handling of belts or discs from the dictator to the typist.

While the SRN is impressive by itself, another feature of the system, the Magnetic Tape/Selectric Typewriter

Ugh! Wagon trains getting heap

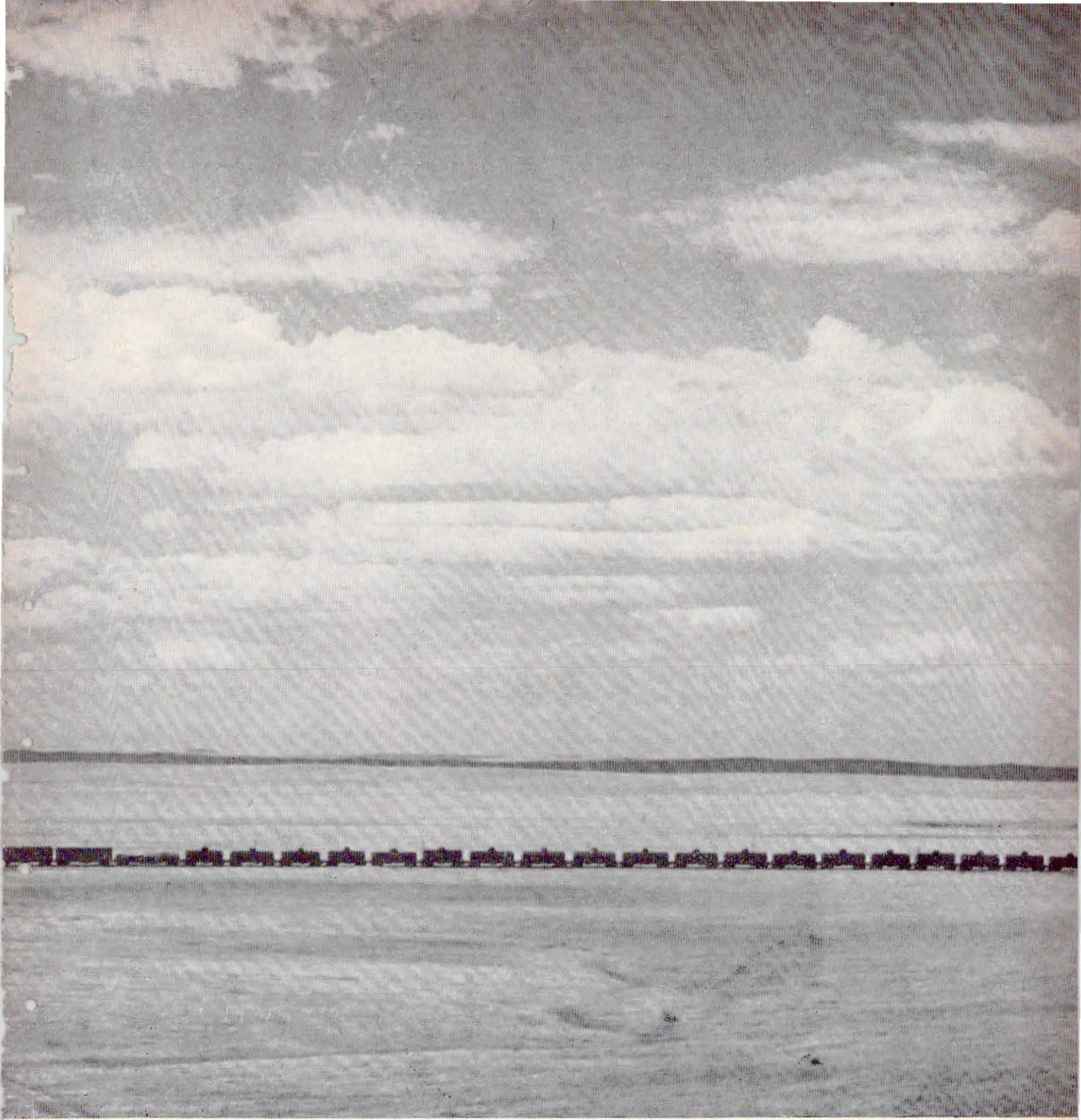
In Indian country—as everywhere—the Iron Horse is bigger than ever, stronger than ever, faster than ever.

And it's still pioneering. It's pulling giant unit trains that shuttle between grain country and port, between mine and mill, between factory and market . . . shiploads that go where no ship can travel.

It's turning around faster, thanks to new loading and unloading devices. (And shippers are getting better service, lower costs!)

It's riding more and more on welded rail—maintained with ever more ingenious track machines.

It's pulling cars that are ever more varied in size, in shape, in cushioning, in function. They carry the red hot, the frozen, the fluid, the powdered, the rigid, the



bigger!

fragile, the too huge and heavy to travel any other way.

Increasingly, the immortal Iron Horse is obedient to a whole new structure of human and superhuman brainpower—with automatic sensing devices, new signaling and communications, new computerization—all bringing new speed, new accuracy, new efficiency.

New, new, new—that's the way it is in today's new railway age. How do railroaders keep up with all this progress? Through the pages of weekly RAILWAY AGE. What a place to tell people what's new with *you!*

Be part of the weekly excitement in **RAILWAY AGE** *the transportation weekly*

FORM LETTERS, with variations added by operator, can be spun out in minutes with Magnetic Tape/Selectric Typewriter working off pre-recorded form-letter tape.

(MT/ST) almost steals the whole show.

Like other railroads, Santa Fe has found that many routine accounting department letters have only a few variables, such as address, waybill number, car number, dollar figures. The use of preprinted form letters with blanks that were filled in by typewriter or, in some cases, by hand, had been an accepted practice. Sheer volume probihited such correspondence from being handled efficiently in any other manner.

An immediate analysis of accounting department correspondence revealed about 65 situations in which letters could be standardized. These "standard" letters were typed on the MT/ST unit, which recorded them on a re-usable tape. Blanks were left for the variables.

• **"Standard" practice.** When a dictator wants to use one of the standardized letters, he dictates "Form letter P-27," or whatever the designation may be, then dictates only the variables. The MT/ST operator (Santa Fe has two such machines) selects the proper magnetic tape cartridge from her desk and loads it into the unit. After the typist dates and addresses the letter, the MT/ST automatically types the letter at 150 words per minute, stopping at the blank spaces so the operator can insert the variables. A normal three- or four-paragraph letter can be turned out in about three minutes—a saving of eight or nine minutes per letter. An additional plus comes for the dictator: He need check only the variables, because he knows the balance of the letter will be perfect.

Since the original 65 standard letters were selected, Santa Fe has expanded use of the MT/ST so that approximately 150 letters and 30 standard statements have been "programmed."

One of the MT/ST units also has the ability to "edit" previously programmed letters or forms to meet changing conditions. If a word, sentence or paragraph of a standard letter needs to be revised, the operator inserts the master tape into the unit and allows it to run until it reaches the part needing updating. The typist then retypes the area in question, thus "editing" the master tape. Future letters will contain the changes.

• **The personal touch?** Santa Fe has found that individually-typed letters from the MT/ST unit produce a better reaction on the part of the recipient than did the old pre-printed letters. One result: Quicker responses. And, while no figures are available, there is some evidence that this has even had an effect on receivables.

MT/ST benefits don't stop with routine correspondence. Accounting reports filled with columns of figures have long been a difficult typing chore, but the units have proven helpful here, too.

With the MT/ST, the operator types a rough draft at her best speed, using plain paper or a guide form. Obvious typographical errors are immediately corrected by backspacing and striking over the mistake, which automatically corrects the tape. After the rough draft is proof-read, any necessary corrections are made by the typist, again updating the tape. When everything is corrected, the tape is inserted into the machine and the report is automatically typed at 150 words per minute, without error.

Certain reports that require periodic updating are especially adaptable to MT/ST. For example, the accounting department prepares an annual departmental inventory of equipment, which runs to about 20 8½-by-11-inch pages. It is replete with equipment numbers, purchase dates and a number of other figures: It might be classified as a typist's nightmare—and it formerly took a good typist about two days to complete it, after which every digit had to be carefully checked. MT/ST changed all that.

When the report was typed in 1967, a permanent tape was prepared. Less than 10% of the figures change in an average year. So, this year, Santa Fe simply took last year's report, penned in the changes, and handed it to the MT/ST operator. She inserted the master tape from 1967, let the machine copy it automatically until it arrived at a revised figure, typed in the change manually, then turned the machine loose again. The lengthy report was completed in less than half a day. And the only figures that needed to be checked were the revisions. The others were automatically right.

• **Emphasis on training.** Santa Fe works closely with IBM representatives in a continuing training program. The first session covers use of the equipment The second, one month later, goes into sentence structure and dictating habits, with a question-and-answer conference in which problems are discussed by dictators and transcribers. A third session is a short-course in transcribing for dictators and in dictating for typists, which helps establish each person's responsibility to the other. Finally, there is a refresher course every six months.

Santa Fe has a smaller SRN installation in the general auditor's office at Chicago, with two SRN recorders serving 28 dictating stations.

General Auditor Willingham feels the new look in correspondence provided by the system, plus the much more efficient and expeditious handling, is extremely important: "Delays in initiating or answering correspondence impair the efficiency of any office. But more importantly, they may cause our patrons to become dissatisfied with service. Serving the customer is the ultimate goal—and this new system is part of our continuing effort to improve that service." ■

Fred E. Deines
Burlington

John D. Rezner
Burlington

Douglas L. Fletcher
GTW

Joseph G. Dooley
GTW

Byron E. Lutterman
Milwaukee

W. F. Thompson
Rock Island

PEOPLE IN THE NEWS

ASSOCIATION OF AMERICAN RAILROADS.—G. Merrill Moody, administrative assistant to the vice president, appointed to the newly created post of manager of personnel, Washington.

ATLANTA & WEST POINT—WESTERN OF ALABAMA—GEORGIA.— Vinson L. Cook appointed purchasing agent, Atlanta, Ga., succeeding **H. W. Bray,** who retired July 31, after 44 years of service.

BESSEMER & LAKE ERIE.—S. O. Rentschler, chief mechanical officer, Greenville, Pa., retired July 31 after more than 44 years of railroad service, the last 15 with the B&LE. **William D. McNeilly,** in addition to his responsibilities as general superintendent, has assumed direction of the car and locomotive department.

J. E. Moerke, manager labor relations, appointed director labor relations, succeeding **S. G. Fisher,** who retired July 31, after over 45 years with the B&LE. **J. J. Snyder** appointed manager labor relations and **R. B. McGinley,** supervisor labor relations.

BURLINGTON.—Fred E. Deines, assistant vice president—sales, elected vice-president—traffic, to succeed **Guy R. Glover,** who retired July 31 after 50 years of service.

John D. Rezner, general manager of freight sales-central region, advanced to assistant vice president-sales. **William L. Malone,** assistant general manager of freight sales-central region, succeeds Mr. Rezner, **Joseph R. Grimes,** regional sales manager, Omaha, named general manager of freight sales there.

J. M. Findlay appointed assistant general purchasing agent, Chicago. Mr. Findlay was formerly purchasing agent, **Colorado & Southern,** Denver. **C. T. Bradshaw** named assistant general purchasing agent, Chicago.

Lewis A. Johnson, staff officer-labor relations, Omaha, becomes assistant to general manager—labor relations there.

GRAND TRUNK WESTERN.—Douglas L. Fletcher, superintendent of transportation, named to the newly created position of

(Continued on page 37)

This financing has not been and is not being offered to the public.
This advertisement appears only as a matter of record.

August 2, 1968

$4,059,278

Soo Line Railroad Company

Equipment Lease and Conditional Sale Agreement
10 General Electric Diesel Locomotives
and
100 Open Top Quadruple and
Multi-purpose Hopper Cars

Financing arranged by

DAIN, KALMAN & QUAIL
INCORPORATED

SINCE 1909 MEMBER NEW YORK STOCK EXCHANGE

MINNEAPOLIS/ST. PAUL

Circle 7 on coupon page 32

Never mind the fine print.

What do you do when it doesn't work?

Sometimes, even something we make stops working.

Sometimes it's our fault. Sometimes it's your fault. And, sometimes it's nobody's fault. That's why every industry has warranties.

Ultimately, only one thing is important: being able to count on the good name of the manufacturer.

Pullman-Standard's good name has a hundred year history. But this assurance of quality is more than reputation. Nowhere is it more tangible than in our Sales and Service engineers, who often call on you before you have to call on them.

When it comes to quality follow-thru, we put our people where others put promises.

Pullman-Standard
WORLD'S LARGEST RAIL CAR MAKER
200 South Michigan Avenue, Chicago, Illinois 60604

A Division of Pullman Incorporated

NEW PRODUCTS REPORT

Data system (RA-1)

A multi-purpose data communication system performs a variety of functions, including high-speed telephone transmission of data to a computer without preparing keypunched cards.

A removable magnetic tape cartridge provides a storage capacity of 180,000 characters, or 30,000 words. Data typed in any format on a standard-keyboard electric typewriter can be stored in the tape cartridge and automatically retrieved as a print-out at nearly 175 words a minute or transmitted in an ordinary direct-dial phone call at 1,000 words a minute. The cartridge is interchangeable with other tape cartridges.

The system can serve as a communication link between two points, for information retrieval. Compatible with most standard computers, the electronic package reduces paperwork, eliminates the possibility of lost or delayed reports, and assures that vital information gets to its intended destination accurately while still current. Any typist can operate the system without special training. *Communitype Corp.*

Truck body (RA-2)

A time-saving utility body, job-planned, to save time and improve efficiency has outside compartments fitted with removable shelves and bin dividers. Doors are of die-formed double-panel construction, equipped with keyedalike slam-action locks. The body, of unitized welded steel construction, is supported by steel U-beams. The rear bumper step and the flooring of the roomy truckbed are of safety-tread steel plate. *Reading Body Works, Inc.*

Radio (RA-3)

A new railroad radio communication unit features a fully transistorized transmitter, receiver and power supply. It is less than one-half the size of the previously available 2R model. Weight varies from 18 to 25 lb, depending upon model. The radio features integrated circuits. Three models are available for operation from either a 12-volt DC, 72-volt DC/12-volt DC, or 117 volt AC/12-volt DC source. *Signal & Communications Division, WABCO.*

Supervisory controls (RA-4)

A third-generation supervisory control and data acquisition (SCADA) system utilizes a stored program digital computer for the heart of the master station. Called NMB-1, it is intended to achieve its maximum potential in the medium-to-large systems applications. The use of a compact, inexpensive, powerful third-generation control computer has enabled the introduction of a software master station with significantly improved flexibility at competitive prices with hard-wired SCADA systems.

The software master directs the following functions via its stored program: remote on/off; remote supervision of status; direct digital control; remote or local data logging; and telemetering of digital data.

The SCADA program routines are the standard ones necessary to make all systems function. Included in this group are the communication channel management, security monitoring, control and data acquisition modes, priority interrupt servicing, and data traffic management, among others. *Sangamo Electric Co.*

RAILWAY AGE
THE TRANSPORTATION WEEKLY

30 Church Street, N.Y., N.Y. 10007 READERS' SERVICE (Att. George Johnson)

PLEASE SEND ADDITIONAL INFORMATION ABOUT PRODUCTS IN ADVERTISEMENTS NUMBERED: 1 2 3 4 5 6 7 8 9 10 11 12

PLEASE SEND INFORMATION ABOUT PRODUCTS DESCRIBED ON PAGE 32 MARKED: RA-1 RA-2 RA-3 RA-4

NAME ..... TITLE .....

COMPANY .....

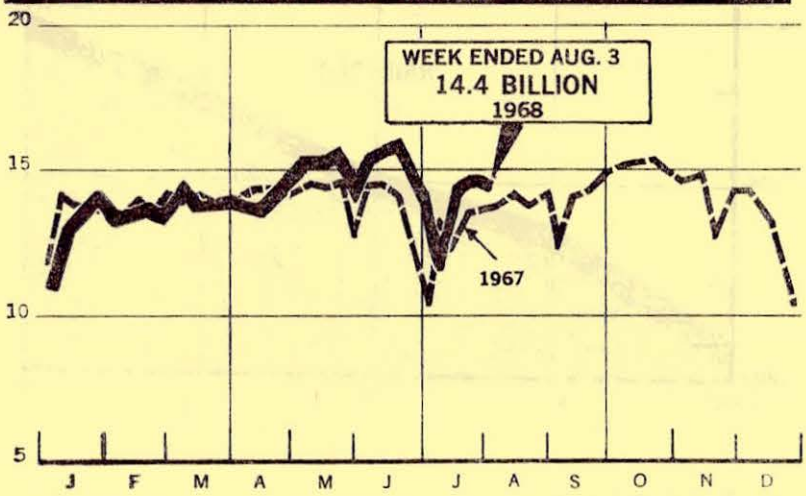
ADDRESS .....

CITY ..... STATE ..... ZIP .....

● Inquiries can be processed only if title and company are shown. 8/19/68

RAIL FREIGHT TRAFFIC TRENDS

BILLION TON-MILES (Estimated)



Source: Association of American Railroads

EMPLOYMENT

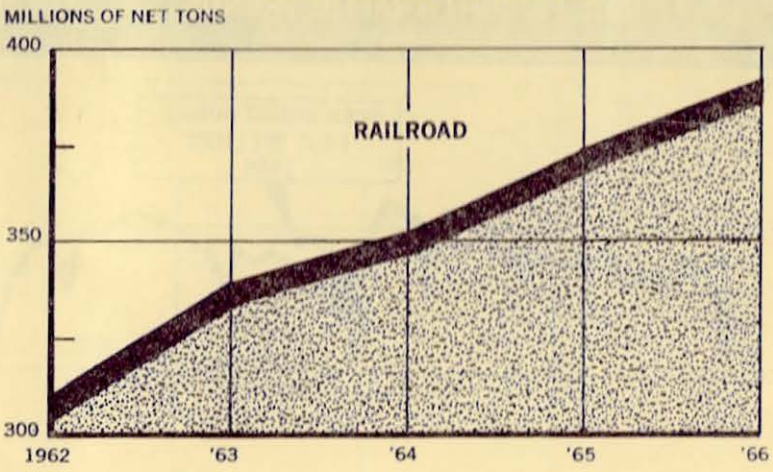
Employee Group	Number of Employees, Mid-month Count June 1968	Per Cent Change from June 1967
Total-all employees	602,962	—3.40
Executives, officials, and staff assistants	15,871	2.33
Professional, clerical and general	129,108	—3.38
Maintenance of way and structures	94,211	—1.76
Maintenance of equipment and stores	133,764	—4.60
Transportation (other than train, engine, and yard)	52,643	—9.33
Transportation (yardmaster, switchtenders, and hostlers)	9,836	—0.57
Transportation (train and engine service)	167,529	—2.00

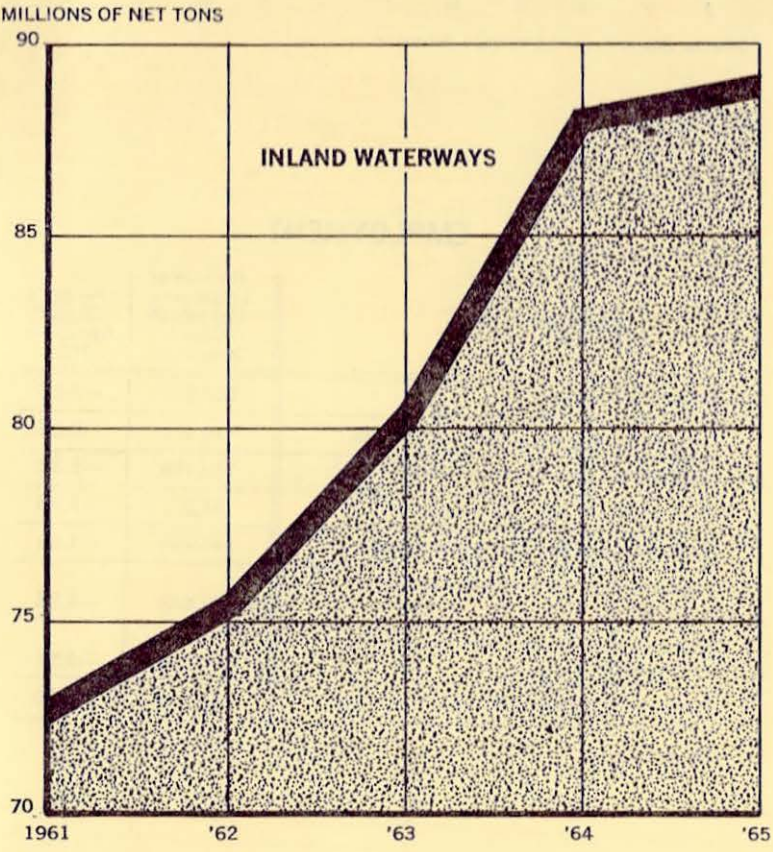
Source: ICC

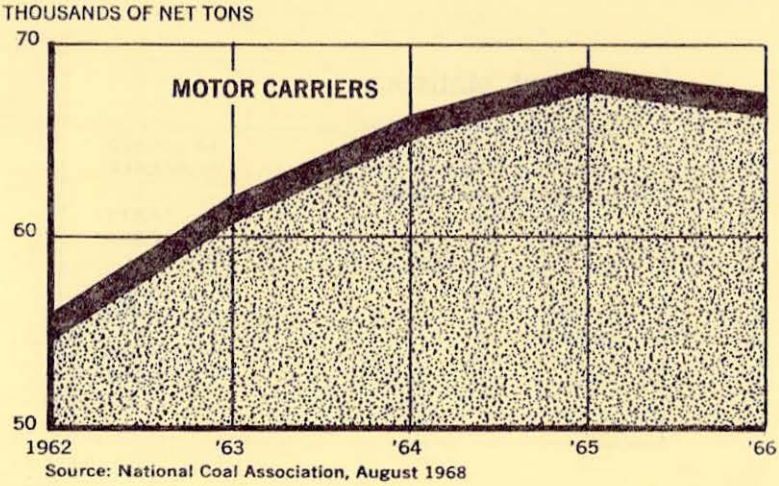
Current statistics

Carloadings, revenue freight	
32 wks., 1968	17,208,690
32 wks., 1967	17,074,812
New freight cars on order	
July 1, 1968	17,810
July 1, 1967	30,225
New freight cars delivered	
6 mos., 1968	31,355
6 mos., 1967	47,587
Serviceable cars	
July 1, 1968	1,396,613
July 1, 1967	1,420,402

COAL TRAFFIC TRENDS







Source: National Coal Association, August 1968

MARKET OUTLOOK

CARLOADINGS

Loadings of revenue freight in the week ended Aug. 10 totaled 540,211 cars, the Association of American Railroads announced on Aug. 14. This was a decrease of 13,893 cars, or 2.5%, compared with the previous week; a decrease of 13,127 cars, or 2.4%, compared with the corresponding week last year; and a decrease of 41,334 cars, or 7.1%, compared with the equivalent 1966 week. Ton-miles generated by carloadings in the week ended Aug. 10 are estimated at 14.0 billion, an increase of 1.2% above the corresponding week of 1967, and a decrease of 1.3% below the 1966 week.

REVENUE FREIGHT CARLOADINGS

For the week ended Saturday, Aug. 10

District	1968	1967	1966
Eastern, including Allegheny and Pocahontas	201,183	214,548	225,641
Southern	122,047	109,334	111,656
Total Eastern and Southern Districts	323,230	323,882	337,297
Northwestern	74,732	85,756	95,026
Central Western	105,048	106,270	111,160
Southwestern	37,201	37,430	38,062
Total Western Districts	216 981	229,456	244,248
Total All Roads	540,211	553,338	581,545
Commodities:			
Grain and Grain Products	44,151	55,981	57,647
Livestock	888	863	1,498
Coal	106,223	113,930	114,502
Coke	6,702	6,429	7,696
Forest Products	42,047	40,766	39,118
Ore	44,889	48,110	56,899
Merchandise l.c.l.	4,080	4,484	6,025
Miscellaneous	291,231	282,775	298,160
August 10	540,211	553,338	581,545
August 3	554,104	549,740	584,011
July 27	566,058	548,923	592,510
July 20	565,016	484,548	572,535
July 13	549,532	530,110	565,660
Cumulative total, 32 weeks	17,208,690	17,074,812	17,959,494
Estimated revenue ton-miles (billions) 32 weeks	460.1	438.4	449.9

PIGGYBACK CARLOADINGS

U.S. piggyback loadings for the week ended Aug. 3 totaled 27,265 cars, carrying 43,475 trailers, compared with 23,598 cars, carrying 38,528 trailers, in the corresponding 1967 week. Loadings for 1968 up to Aug. 3 totaled 778,909 cars, carrying 1,263,658 trailers, compared with 695,094 cars, carrying 1,140,900 trailers, in the corresponding period of 1967.

IN CANADA

Canadian loadings were not available as this issue went to press.

FREIGHT TRAIN CARS

• *Southern.*—Ordered 50 100-ton, 4,180-cu-ft-capacity Airslide covered hopper cars from General American at a cost of $1,045,000. Delivery will be completed this month.

• *Trailer Train.*—Ordered an additional 643 89-ft, 4-inch cars as follows: from ACF, 52 low-level, 20 all-purpose and three standard-level cars; from Bethlehem, 390 standard-level cars; from Pullman-Standard, 150 low-level and 28 all-purpose cars. Since Jan. 1 Trailer Train has ordered a total of 3,713 new cars. The TTX fleet on Aug. 5 included 46,778 cars in service or on order.

PASSENGER TRAIN CARS

• *New York City Transit Authority.*—Ordered an additional 200 air-conditioned subway cars from St. Louis Car Division of General Steel Industries, at a cost of $26,782,106. This brings to 600 the number of air-conditioned cars now on order for NYCTA. The new order was placed under an option in Contract R-42 on which GSI was the successful low bidder last January. That contract also called for 200 cars and production is now under way at GSI's St. Louis plant.

LOCOMOTIVES

• *Penn Central.*—Ordered 100 heavy-duty diesel-electric freight locomotives at a cost of approximately $24.5 million. Electro-Motive will supply 70 units, of which five will be of 3,600 hp and 65 of 3,000 hp. General Electric will supply 30 3,300-hp units. All are scheduled for delivery by November of this year.

NEW FACILITIES

• *Canadian National.*—Awarded a $1.5-million contract to General Railway Signal for the supply of CTC equipment for the Kingston Division, between Kingston and Clarke East, Ont., 115 miles. GRS high-speed, solid-state coding equipment, System 4000, will be used to link 21 remote field locations with the pushbutton, NX route type control console at Belleville, Ont. GRS is supplying 435 Type SA-1 searchlight signals, 88 Model 5F switch machines, and 29 Model 9B electric switch locks.

• *Frisco.*—Ordered Wheel Thermo-Scanner equipment for five locations from General Railway Signal. The units automatically detect and report hot boxes.

• *Penn Central.*—Purchased from Motorola Communications and Electronics, Inc., a portable radio control system for an overhead crane in the heavy duty repair shops at Altoona, Pa. The controls are worn by an operator who manages the crane from the floor of the shop rather than from the cab attached to the bridge of the crane.

YOU OUGHT TO KNOW

Southern Cal gets a look at the BART car

Residents of Los Angeles county may be doing a bit of dreaming, in coming weeks—after they explore the Bay Area Rapid Transit District "design car," now on loan from BART to the Southern California Rapid Transit District. SCRTD made arrangements for the display of the car after the legislature approved and Gov. Ronald Reagan signed a bill to permit a vote on a half-cent sales tax to guarantee bonds for first-stage rapid transit and expanded bus services in Los Angeles county. The design car's first stop was at the Watts Summer Festival '68. Showings at other points in the county will follow. The design car, which cost about $500,000 to develop, has already been seen by almost 500,000 Bay Area residents during BART-sponsored tours in 1965-66.

Cornell will study terminal delays with state grant

The New York State Science and Technology Foundation has awarded a $45,000 grant to Cornell University's Department of Environmental Systems Engineering for a one-year study of "ways to reduce annoying delays at passenger and freight terminals." The study will put special emphasis on multi-modal travel or shipment. Conclusions will be tested in actual situations in airport and rail and highway-carrier terminals.

From GTW/CN: Free visas to "Son of Expo"

Passengers taking Grand Trunk Western/Canadian National from Chicago to Montreal, or CN from Buffalo to Montreal, are getting an extra with their tickets—a free seven-day visa to "Man and His World," the successor to Expo '67 at Montreal. Visas entitle holders to free admission to the exposition any day or every day during a seven-day period.

Federal organizes new division: Western, Cullen

Federal Sign & Signal Corp. has set up a new Western, Cullen Division, following completion of its acquisition of Western Industries, Inc., and Cullen-Friestedt Co. Federal Chairman and President Robert T. Gilchrist said that George L. Hudson, former chairman and president of Western, will manage the division.

ASTT plans annual meeting in Atlanta

A report on automatic car identification will be a highlight of the 23rd annual meeting of the American Society of Traffic and Transportation, Inc., to be held at the Regency Hyatt House, Atlanta, on Sept. 6. The ACI presentation will be made by J. W. Barriger, manager, transportation controls systems, Sylvania Electric Products (whose KarTrak system has won AAR approval). Another featured speaker will be former Georgia Gov. Carl E. Sanders.

Steel shipments reach new high in first half

Shipments of steel mill products totaled a record 52,566,000 net tons in the first six months of 1968. In the corresponding 1967 period, shipments totaled 42,400,000 tons. American Iron and Steel Institute attributes the rise partly to hedge buying during a period when a work stoppage (which failed to materialize) loomed.

Chicago Belt holds firm, strike goes on

The Belt Railway of Chicago was still strike-bound last week, despite increasing pressures on the National Mediation Board to certify the dispute to President Johnson, and thus get creation of an emergency board. A member of the NMB was in touch with the parties, but there was no action from the Board. Among the strongest of the petitions for an emergency board was a wire from the chief executive officer of the Chicago Association of Commerce and Industry to President Johnson, Secretary of Labor Wirtz, and Transportation Secretary Boyd. It pointed out that the strike has already cost Chicago alone $50 million, and asked "how critical this situation must be before [a board] is appointed?"

Study LOCOMOTIVE MECHANICAL EQUIPMENT MAINTENANCE in spare time— at home

The man they respect in most shops is the one who's apt to know the answer when a problem arises. You know a man like that; wouldn't you get a lot of satisfaction and personal pride in being like him? Even though it may not show in the pay check, you can't measure such satisfaction in dollars.

You can be such a man by taking this two-year course for mechanical department employees who want to know more about locomotive mechanical equipment maintenance and repair. Two lessons a month, in simple, nontechnical language, guide you swiftly to a better working knowledge of the subject. Your lessons are graded by instructors who give individual, personalized advice as needed. The cost is low and payable in monthly installments. For full information, return coupon.

RAILWAY EDUCATIONAL BUREAU
1809 Capitol Ave.
Omaha, Neb. 68102

Send full information on locomotive mechanical equipment maintenance home study course.

Name_____

Address_____

City, State, ZIP_____

Railroad_____

Job title_____

RA-8/19

(*Continued from page 29*)

assistant general superintendent of transportation, Detroit. Mr. Fletcher's successor is **Joseph G. Dooley,** transportation planning officer, who in turn is succeeded by **James L. McNutt,** work study analyst. **Thomas W. Smith,** superintendent, Chicago division, Battle Creek, Mich., named special assistant to the general superintendent of transportation, to succeed **John C. Walker,** retired.

MILWAUKEE.—Byron E. Lutterman, western counsel elected vice president and western counsel, with headquarters remaining in Seattle. Mr. Lutterman succeeds the late **Larry H. Dugan** (RA, July 22, p. 28).

S. Edward Herzog, staff assistant to the vice president-labor relations, retired July 1 after 46 years of service.

Francis J. Galvin, district manager-sales, Miles City, Mont., transferred to Great Falls, Mont., succeeding **Leo F. Walsh,** retired (RA, July 29, p. 63).

John K. Pain, manager of passenger services retired July 31 after more than 50 years' service.

ROCK ISLAND.—John B. Buffalo, general manager, Kansas City, Kans., appointed chief operating officer, Chicago. **William F. Thompson,** senior assistant general manager, Kansas City, succeeds Mr. Buffalo.

George W. Brewer, district manager-freight sales, Memphis, Tenn., transferred to Houston. Mr. Brewer's successor is **Robert L. Ferguson,** district manager-freight sales Indianapolis. **Carlos J. Indest,** freight sales representative, New Orleans, named district manager-freight sales there, to succeed **William T. French,** retired.

SANTA FE.—Ray H. Adams, assistant general manager, Los Angeles, named assistant to vice president-operations, Chicago. **C. E. Rollins,** superintendent, Albuquerque division, Winslow, Ariz., replaces Mr. Adams with jurisdiction over the Los Angeles and Albuquerque divisions, and in turn is replaced by **Earl Gillmore.**

Frank N. Grossman, special representative, public relations, San Francisco, appointed assistant manager of public relations, Chicago. Mr. Grossman's successor is **Gilbert L. Sweet,** special representative, Chicago, who becomes regional manager. **Robert E. Gehrt,** traveling representative, Chicago, replaces Mr. Sweet. **John W. Tilsch** replaces Mr. Gehrt. **Jerome F. Curto** named manager, film and photographic bureau, Chicago. **Frank E. Meitz** becomes chief photographer, system, Los Angeles. **L. J. Cassell, W. B. Cox, George T. Grader,** and **H. P. O'Leary,** special representatives-public relations, appointed regional managers-public relations, with headquarters remaining at Dallas, Topeka, Amarillo and Los Angeles, respectively.

Dr. O. L. Hanson appointed medical director, Chicago. He was formerly chief surgeon, **The AT&SF Memorial Hospital, Inc.,** Topeka, Kans.

Fred W. Norkewitz named assistant to general purchasing agent, Chicago, succeeding E. J. O'Connor who retired July 31. **D. E. Considine** appointed purchasing agent-new equipment, Chicago.

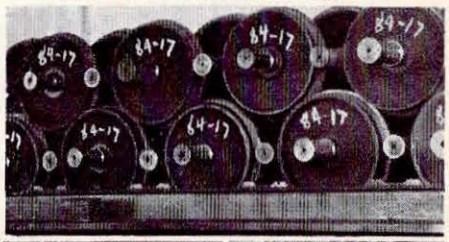
(*Continued on page 38*)

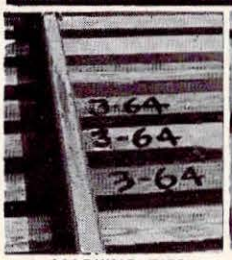
FASTEST WAY TO MARK-IDENTIFY RAILS WHEELS TIES
TOOLS • SIGNS • REPAIR PARTS • DAMAGE INSPECTION
BATTERIES • PARTS • WHEELS • EQUIPMENT
RAILS • TIES
Markal Paintstik MARKER
PERMANENT • WEATHERPROOF • WATERPROOF

THOUSANDS OF RAILROAD APPLICATIONS USE

Markal® "B" Paintstik® MARKERS

MARKING SPARE WHEELS





MARKING TIES

MARKING RAILS

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Daniel J. Wagner
Abex

SEABOARD COAST LINE.—J. R. LeGrand, general manager industrial development, appointed assistant vice president in charge of industrial development, with headquarters as before at Jacksonville.

SUPPLY TRADE

Milton E. Leppert, chief mechanical officer, **Illinois Terminal,** St. Louis, Mo., has been appointed assistant chief engineer, **Magnus Metal Corp.,** subsidiary of National Lead Co., Chicago. In addition to other duties, Mr. Leppert will be in charge of the Magnus Roller Bearing Service Department.

Daniel J. Wagner, Chicago district sales manager, **Abex Corp.,** appointed manager of mechanical products, Railroad Products Group, New York (RA, Aug. 12, p. 38).

Daniel J. Sullivan has been named vice president, **General Transport Equipment Co., Inc.** with headquarters at Chicago. He was formerly general manager in charge of sales and operations of the truck and trailer leasing division, **Hertz Corp.**

Samuel I. Lefton, president of **Lefton Iron & Metal Co.,** East St. Louis, Il., has announced formation of a new division to handle the company's rapidly expanding railroad track dismantling and relaying rail activities. **A. P. Ashner,** executive vice president, will manage the division, assisted by **R. L. Kraft** and **J. B. Van Matre** as field supervisors.

OBITUARY

C. W. Floyd Coffin, 80, board chairman, **Franklin Balmar Corp.,** died Aug. 2 at Englewood Hospital, Englewood, N.J.

Frank W. Hillman, 88, retired assistant engineer of maintenance, **Chicago & North Western,** died July 30 in Evanston Hospital, Evanston, Ill.

Walter C. Kresge, 58, chief mechanical officer, **Western Maryland,** Hagerstown, Md., died July 27 at his home in that city.

Rowland L. Williams, 80, retired president and former chief executive officer, **Chicago & North Western,** died Aug. 3 at his home in New Smyrna Beach, Fla.

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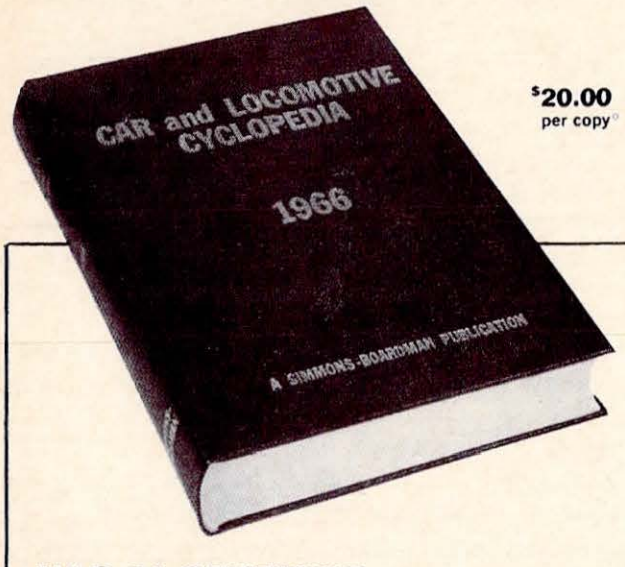

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VIEWPOINT

Have we been out-lobbied —again?

The proposition that Congressmen can be "bought" by any special interest is repugnant, and we don't accept it as a general rule for one minute.

Lobbying is an honorable and valuable part of the legislative process; it need have no connection with another old Washington custom, that which comes under the heading of "contributions." There doubtless exists a gray area where the two sometimes meet—but not nearly as often as excitable reporters would have us believe.

We therefore accept, at face value, the recent statement by U.S. Rep. John C. Kluczynski, of Illinois, to the effect that "Nobody has tried to buy my vote. Nobody could buy my vote, and certainly not for the meager sum of $3,000."

Congressman Kluczynski was moved to make this statement following widespread allegations that certain members of Congress friendly to the interests of highway motor carriers had been the recipients, in one way or another, of highway money.

What interested us most in Mr. Kluczynski's statement was not his refutation of what he called "sensational misinformation." More to the point were his stated reasons for supporting several pieces of legislation close to the hearts of highwaymen.

Said the Congressman:

"I have supported and will continue to work for any sound legislation that will encourage and assist in the economic and social development of the City of Chicago, the State of Illinois, the Midwest as a region, and the Nation as a whole. . . .

"The progress of this nation is dependent upon its transportation. Transportation in this nation is basically highway transportation. We **do not have our highway transportation system because we are a wealthy nation. We are a wealthy nation because we have our highway transportation."**

This raises a number of questions.

—Why haven't the Chicago railroads been able to arouse in Congressman Kluczynski the same enthusiasm for railroading that he clearly feels for trucking? Is it because railroads have made a lesser contribution to the development and prosperity of Chicago and Illinois than the trucking industry?

—Why haven't the railroads, on a national level, been able to persuade all of the Kluczynskis in Congress that any nation whose freight is being moved 43% by rail can hardly be said to rely "basically" on highways?

—Why is it that at a time when highwaymen are seeking, and receiving, blessing after blessing on Capitol Hill, the railroads have been winning their Washington headlines only as the villains in the passenger-train-off piece?

It's Time to Tell Our Story—Loud and Clear

The "bought vote" theory is too easy. Isn't it closer to the truth to say that we have simply been out-lobbied?

With the public and the press aroused as never before over what the Wall Street Journal last week called "the planless proliferation of superhighways across the land," railroads have an unparalleled opportunity to tell their own story.

Will they seize it?

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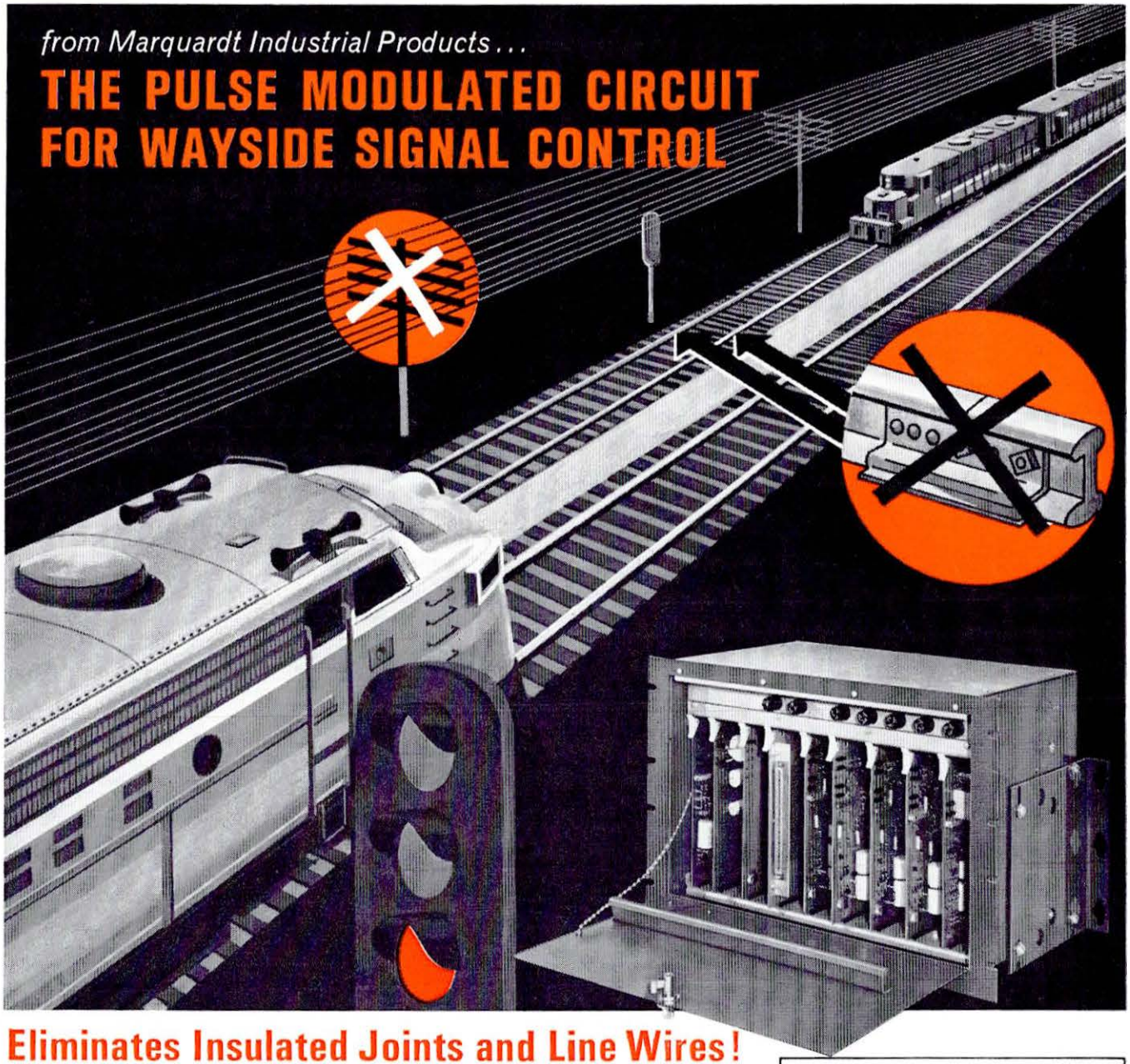

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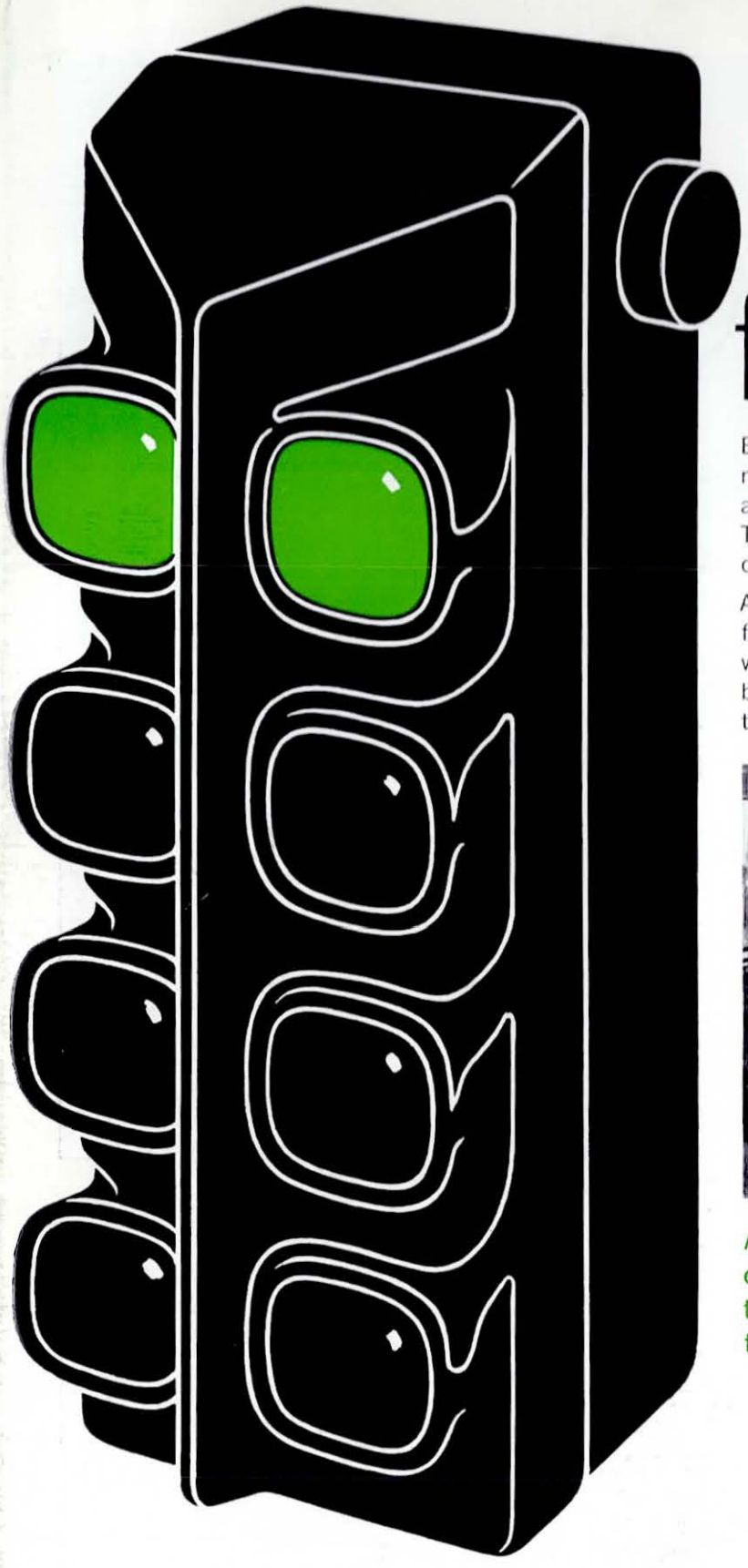

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